API Well No: 43047512690000 Received: 8/17/2010

		ST DEPARTMENT DIVISION O		JRAL RES				FORI		
APPLI	CATION FOR	PERMIT TO DRILL	L				1. WELL NAME and	NUMBER NBU 921-25H3DS		
2. TYPE OF WORK  DRILL NEW WELL	REENTER P8	&A WELL DEEPE	N WELL				3. FIELD OR WILDCAT  NATURAL BUTTES			
4. TYPE OF WELL Gas We	ell Coalb	ped Methane Well: NO					5. UNIT or COMMU	NITIZATION AGRE	MENT NAME	
6. NAME OF OPERATOR KERF	R-MCGEE OIL & (	GAS ONSHORE, L.P.					7. OPERATOR PHO	<b>NE</b> 720 929-6007		
8. ADDRESS OF OPERATOR P.O	. Box 173779, [	Denver, CO, 80217					9. OPERATOR E-MA Kathy.Schne	IL ebeckDulnoan@anad	arko.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UO 1189 ST		11. MINERAL OWNE	ERSHIP DIAN (	STATE (	)	FEE 🔵	12. SURFACE OWN	ERSHIP DIAN DIAN STATE (	FEE (	
13. NAME OF SURFACE OWNER (if box 12	= 'fee')						14. SURFACE OWN	ER PHONE (if box 1	2 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')						16. SURFACE OWN	ER E-MAIL (if box 1	.2 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C	IONS	<b>PRODUCT</b>		ROM NO	19. SLANT  VERTICAL DIF	RECTIONAL (📵 HO	DRIZONTAL (	
20. LOCATION OF WELL	FC	OOTAGES	QTR-	-QTR	S	ECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	2074 F	FSL 690 FEL	NE:	SE		25	9.0 S	21.0 E	S	
Top of Uppermost Producing Zone	2395 F	FNL 870 FEL	SEI	NE		25	9.0 S	21.0 E	S	
At Total Depth	2395 F	FNL 870 FEL	SEI	NE		25	9.0 S	21.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	IEAREST L 870		E (Fe	et)	23. NUMBER OF AC	RES IN DRILLING	JNIT	
		25. DISTANCE TO N (Applied For Drilling			AME I	POOL	26. PROPOSED DEF	<b>PTH</b> : 9777 TVD: 9650		
27. ELEVATION - GROUND LEVEL 4983		28. BOND NUMBER	220135	542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496			
		A	ТТАСНМ	ENTS						
VERIFY THE FOLLOWING	ARE ATTACH	IED IN ACCORDAN	ICE WITI	H THE UT	AH (	OIL AND O	GAS CONSERVATI	ON GENERAL RU	ILES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUF	RVEYOR OR ENGINEE	R [	<b>г</b> сом	PLETI	E DRILLING	PLAN			
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	ACE)	FORM	5. II	F OPERATO	R IS OTHER THAN T	HE LEASE OWNER		
DRILLED)	RECTIONALLY	OR HORIZONTALLY		<b>г</b> торо	GRAF	PHICAL MAI	•			
NAME Danielle Piernot	Т	TTLE Regulatory Analys	st			PHONE 72	0 929-6156			
SIGNATURE		DATE 08/17/2010				EMAIL gn	bregulatory@anadarko	o.com		
<b>API NUMBER ASSIGNED</b> 43047512690000	A	APPROVAL				Bo	20 gill			
						Pern	nit Manager			

API Well No: 43047512690000 Received: 8/17/2010

	Propo	sed Hole, Casing, ar	nd Cement			
String	Hole Size	<b>Casing Size</b>	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9777	Г	Г
Pipe	Grade	Length	Weight			Γ
	Grade I-80 Buttress	9777	11.6			Γ
						Г

API Well No: 43047512690000 Received: 8/17/2010

	Prop	oosed Hole, Casing, a	and Cement		
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)	
Surf	11	8.625	0	2410	Г
Pipe	Grade	Length	Weight		
	Grade I-80 LT&C	2410	28.0		Г

## **NBU 921-25H3DS**

Pad: NBU 921-25I

Surface: 2,074' FSL 690' FEL (NE/4SE/4) BHL: 2,395' FNL 870' FEL (SE/4NE/4) Section 25 T9S R21E

> Uintah County, Utah Mineral Lease: UO 1189 ST

## **ONSHORE ORDER NO. 1**

## DRILLING PROGRAM

# 1. – 2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 – Surface	
Green River	1,494'	
Birds Nest	1,796'	Water
Mahogany	2,160'	Water
Wasatch	4,749'	Gas
Mesaverde	7,407'	Gas
MVU2	8,331'	Gas
MVL1	8,878'	Gas
TVD	9,650'	
TD	9.777'	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

## 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

## 5. Drilling Fluids Program:

Please refer to the attached Drilling Program.

## **Evaluation Program:**

Please refer to the attached Drilling Program.

## 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottomhole pressure calculated at 9,650' TVD, approximately equals 6,112 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 3,989 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

## 8. Anticipated Starting Dates:

*Drilling is planned to commence immediately upon approval of this application.* 

## 9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

## Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

## Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

## Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

### **Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

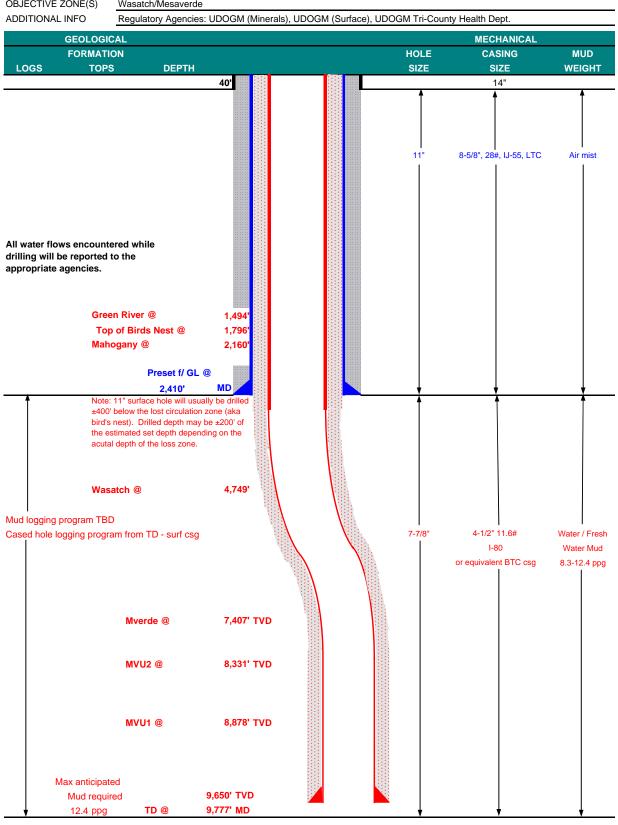
## 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP August 17, 2010 NBU 921-25H3DS WELL NAME TD 9,650' 9,777' MD **FIELD** Natural Buttes **COUNTY Uintah** STATE Utah FINISHED ELEVATION 4,980' SURFACE LOCATION NE/4 SE/4 2,074' FSL T 9S Sec 25 R 21E 40.005462 -109.492434 NAD 27 Latitude: Longitude: BTM HOLE LOCATION SE/4 NE/4 2,395' FNL 870' FEL R 21E Sec 25 T 9S Latitude: 40.007705 -109.493079 NAD 27 Longitude: OBJECTIVE ZONE(S) Wasatch/Mesaverde





## KERR-McGEE OIL & GAS ONSHORE LP

### **DRILLING PROGRAM**

#### **CASING PROGRAM**

									DESIGN FACT	ORS
	SIZE	INTI	ERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C	-40'							
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2,410	28.00	IJ-55	LTC	0.82	1.67	5.11
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9,777	11.60	I-80	BTC	1.90	1.02	2.81

\*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.23

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 3,989 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg) 0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 6,112 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE TAIL	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
		+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	ıtilized	
Option 2 LEAD	1,910'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION LEAD	4,247'	Premium Lite II +0.25 pps	310	10%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,530'	50/50 Poz/G + 10% salt + 2% gel	1,070	10%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. No centralizers will be used.

### **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

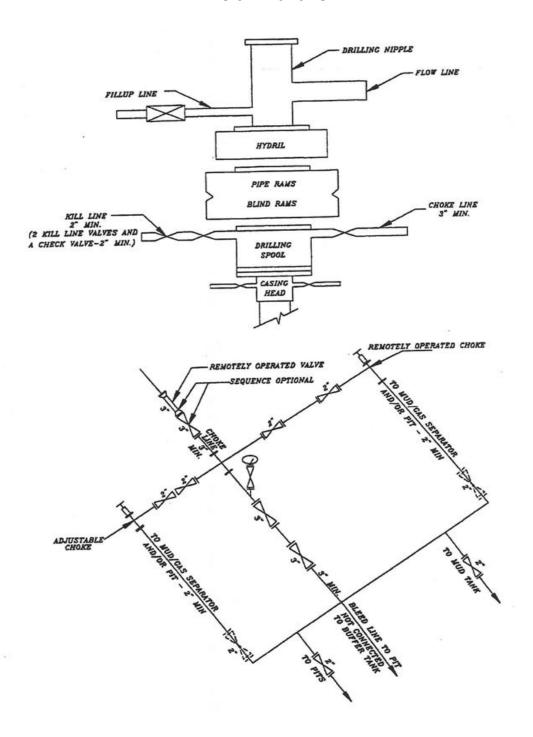
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

ENGINEED.	DATE
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.	
Surveys will be taken at 1,000' minimum intervals.	

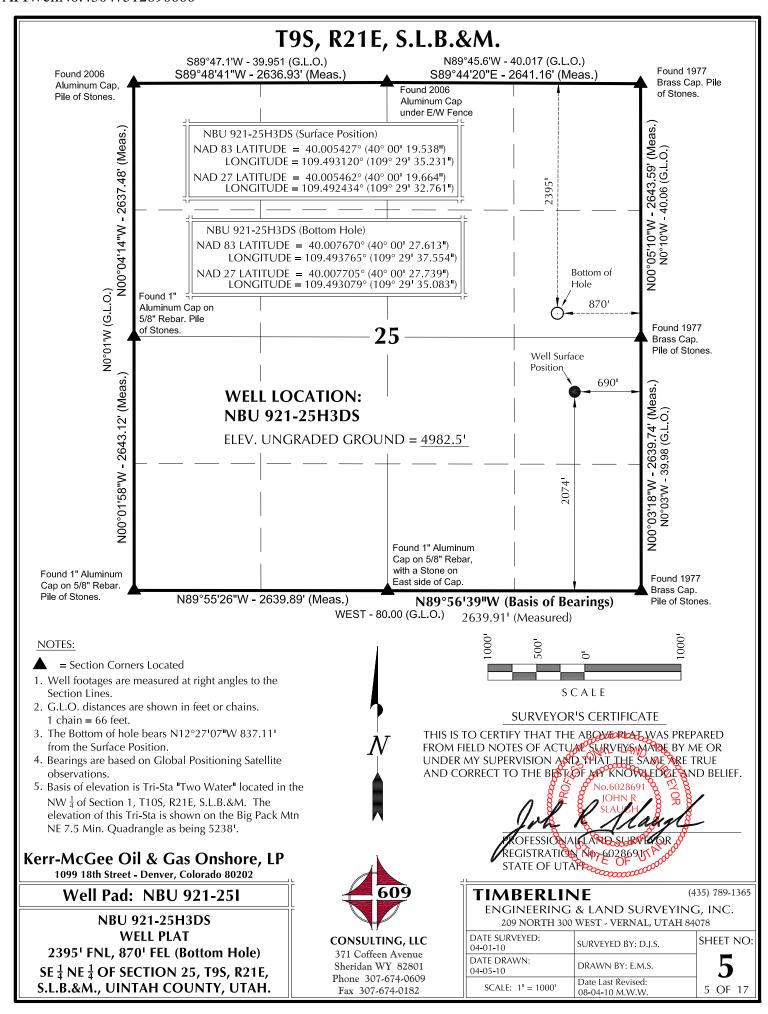
DRILLING ENGINEER:		DATE:
	John Huycke / Emile Goodwin	
DRILLING SUPERINTENDENT:		DATE:
	John Merkel / Lovel Young	

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 921-25H3DS



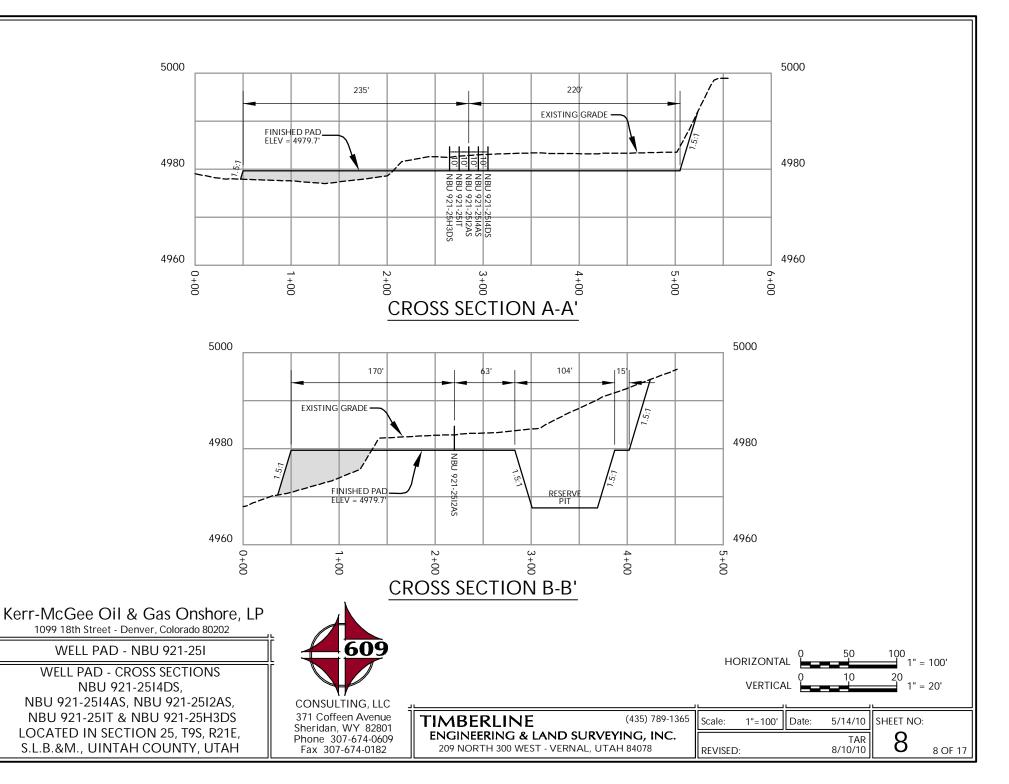
SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



NA/FILL NIAAAF			URFACE POS			BOTTOM HOLE NAD83 NAD27				
WELL NAME	LATITUDE	D83 LONGITUDE	_	NAD27 DE LONGITUI	DE FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU	40°00'19.147'	" 109°29'35.149	9" 40°00'19.2	274" 109°29'32.6	78" 2035' FSL	40°00'13.071"	109°29'27.699"	40°00'13.197"	109°29'25.229"	1420' FSL
921-25I4DS NBU	40.005319° 40°00'19.245'	109.493097° 109°29'35.170	40.005354 )" 40°00'19.3			40.003631° 40°00'17 635"	109.491028° 109°29'27.527"	40.003666° 40°00'17.761"	109.490341° 109°29'25.057"	105' FEL 1882' FSL
921-2514AS	40.005346°	109.493103°	40.005381			40.004899°	109 29 27.327 109.490980°	40.004934°	109 29 23.037 109.490294°	91' FEL
NBU	40°00'19.343' 40.005373°		40°00'19.4 40.005408			40°00'23.203"		40°00'23.329" 40.006480°		2445' FSL
921-2512AS NBU 921-25IT	40°00'19.441' 40.005400°	109.493108°   109°29'35.211   109.493114°		567" 109°29'32.7	40" 2064' FSL	40.006445°	109.493955°	40.006460	109.493269°	924' FEL
NBU	40°00'19.538'	" 109°29'35.231		664" 109°29'32.7	51" 2074' FSL	40°00'27.613"				2395' FNL
921-25H3DS CIGE 98D	40.005427° 40°00'18.587'	109.493120° " 109°29'34.835	40.005462 5" 40°00'18.7			40.007670°	109.493765°	40.007705°	109.493079°	870' FEL
eige 30D	40.005163°	109 29 34.833 109.493010°	40.005198	3° 109.492324°	660' FEL	Baritian ta Bari				
WELL NAME	NORTH	EAST W	ELL NAME	IVE COORDINAT  NORTH		NAME NOR		WELL NAM	IE NORTH	EAST
NBU 921-2514DS	-615.2	579.6 <sup>1</sup> NI 92	BU 1-2514AS	-163.1' 5	94.8 NBU 921-2	<b>512AS</b> 390	-237.1	NBU 921-25H3D	s 817.41	-180.5
N			o Bottom Holis	(To Bottom) (1)	Az=347.54806° 11' Az=347.07''W - 837.11'					
	OF S.L. GLO	SIS OF BEARIN THE SE ¼ OF S .B.&M. WHICI OBAL POSITIC SERVATIONS	SECTION 25 H IS TAKEN DNING SAT	i, T9S, R21E, FROM ELLITE	\	U 921-25H3 BU 921-25H3 BU 921-25H3 BU 921-25H3 BU 921-25	3DS Az. to Exist. W Az. to Exist. W 2AS Az. to Exi 4AS Az. to Exi 14DS Az. to Exi	st. W.H.=162.2 v.H.=161.3347 ist. W.H.=160.1 ist. W.H.=158. xist. W.H.=156	25194° 101.1' 72° 91.2' 18000° 81.4' 65694° 71.6' 73861° 61.8'	
	OF S.L. Gl OB	THE SE <sup>1</sup> 4 OF S .B.&M. WHICH OBAL POSITIO	SECTION 25 H IS TAKEN DNING SAT TO BEAR N	i, T9S, R21E, FROM ELLITE	NB NE NI OL	BU 921-251 BU 921-251 BU 921-251 BBU 921-25	AZ. to Exist. W 2AS AZ. to Exist. W 2AS AZ. to Exist. W 4AS AZ. to Exist. W 14DS AZ. to Exist. W	ist. W.H.=156 xist. W.H.=156	25194° 101.1' 22° 91.2' 18000° 81.4' 65694° 71.6'73861° 61.8'  2=105.3355 80ttom Hole	6.87'
	Gee Oil 8	THE SE \$\frac{1}{4}\$ OF S.B.&M. WHICH OBAL POSITIONS  TO \$\frac{7}{2}\$ OR \$\frac{7}\$ OR \$\frac{7}{2}\$ OR \$\frac{7}{2}\$ OR \$\f	SECTION 25 H IS TAKEN ONING SAT TO BEAR N  S C A L E  E)	, T9S, R21E, FROM ELLITE 189°56'39"W.	NB NE NZ Z	BU 921-251 BU 921-251 BU 921-25 IBU 921-25	AZ. to Exist. W AZ. to Exist. W AS AZ. to Exist. W AAS AZ. to Exis	ist. W.H.=156 xist. W.H.=156	.73861° 61.8	66° (87'
1099 18	Gee Oil &	THE SE \$\frac{1}{4}\$ OF S.B.&M. WHICE OBAL POSITIONS  \$\frac{7}{2}\$  \$\frac{7}{2}	SECTION 25 H IS TAKEN ONING SAT TO BEAR N  S C A L E  S C A L E  S B0202	, T9S, R21E, FROM ELLITE 189°56'39"W.	NB NE N N N N N N N N N N N N N N N N N	BU 921-251 BU 921-251 BU 921-25 BU 921-25 O ° CZL/8·021=ZV	AAS AZ. to EX IADS AZ	ist. W.H.=156 xist. W.H.=156 (To)	2=105.3355 39'52"E 616 Bottom Hole	2.81'
1099 18 WEI	Gee Oil & 8th Street - Do	THE SE \$\frac{1}{4}\$ OF S.B.&M. WHICH OBAL POSITIONS  \$\frac{1}{5}\$ \tilde{\frac{1}{5}}\$ \til	shore, Losover	, T9S, R21E, FROM ELLITE 189°56'39"W.	NB NE NI OL	BU 921-251 BU 921-251 BU 921-25 BU 921-25 TI	AZ. to Exist. W AZ. to Exist. W AS AZ. to EX AAS AZ. to EX AAS AZ. to EX ADS AZ. to EX AZ. to EX ADS AZ. to EX	ist. W.H.=156 xist. W.H.=156 (To)	2=105.3355 39'52"E 616 Bottom Hole	35) 789-136
WELL	Gee Oil & Bath Street - Do LL PAD -	THE SE \$\frac{1}{4}\$ OF S.B.&M. WHICH OBAL POSITIONS  \$\frac{7}{5}\$ \frac{7}{5}\$ \frac{7}{5}\$ \lefter{8} \text{Gas On enver, Colorado} \text{NBU 921} \text{ERFERENCE}	shore, Lo 80202 -251 E PLAT	FROM ELLITE 189°56'39"W.	NB NE NZ Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	BU 921-251 BU 921-251 BU 921-25 BU 921-25	AAS AZ. to EXAMPLE A STATE OF THE STATE OF T	ist. W.H.=156 xist. W.H.=156 (To)	2=105.3355 80ttom Hole SURVEYING SURVEYING WAL, UTAH 840	35) 789-136 6, INC.
WELL	Gee Oil & S.L. GLE OB LE PAD INTI WELLS - NBU	Gas On Enver, Colorado NBU 921  ERFERENCE U 921-25140	shore, Los 251  Shore, Los 251  E PLAT S,	FROM ELLITE 189°56'39"W.	NBN NEW N.	BU 921-251 BU 921-251 BU 921-25 BU 921-25 DAT	AAS AZ. to EXAMPLE AND AZ. TO EXAMPLE AZ. TO EXAMPLE AND AZ. TO EXAMPLE AZ. TO EXA	ist. W.H.=156 xist. W.H.=156 (To)	2=105.3355 80ttom Hole	35) 789-136 G, INC.
WELL WBLL	Gee Oil & S.L. GLé OB B STREET - DO LL PAD - L PAD INTI WELLS - NBU 921-2514AS	THE SE \$\frac{1}{4}\$ OF S.B.&M. WHICH OBAL POSITIONS  \$\frac{7}{5}\$ \frac{7}{5}\$ \frac{7}{5}\$ \lefter{8} \text{Gas On enver, Colorado} \text{NBU 921} \text{ERFERENCE}	shore, Losones, Loson	P  COI 371	NBI NE NI	BU 921-251 BU 921-251 BU 921-25 BU 921-25 Do o o o o o o o o o o o o o o o o o o	IMBERL ENGINEERIN 209 NORTH: E SURVEYED: 1-10 E DRAWN:	INE IG & LAND 300 WEST - VER SURVEYED B	2=105.3355 80ttom Hole (4: SURVEYINC ENAL, UTAH 840 3Y: D.J.S.	35) 789-136 6, INC.
WELL WBU NBU LOCA	Gee Oil & S.L. GLE OB  LL PAD -  L PAD INTI WELLS - NBU 921-2514AS 921-251T & ATED IN SECT	G	shore, Losope EPLATS, 612AS, H3DS, R21E,	ELLITE 189°56'39"W.  COI 371 She	NBN NEW N.	D ° 27.78.77. A STATE OF THE PROPERTY OF THE P	IMBERL ENGINEERIN 209 NORTH: E SURVEYED: 1-10 E DRAWN:	INE IG & LAND 300 WEST - VER	2=105.3355 80ttom Hole (4: SURVEYINC ENAL, UTAH 840 SY: D.J.S. E.M.S.	35) 789-136 6, INC.

K:\ANADARKO\2010\_34\_NBU\_FOCUS\_SEC\_921-25\DWGS\NBU 921-25\V





'APIWellNo:43047512690000'

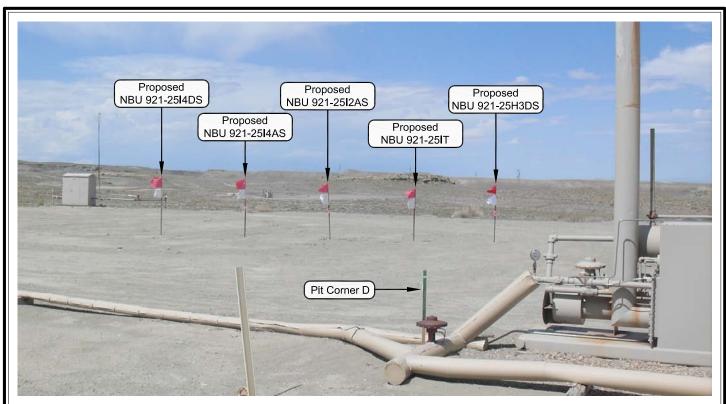


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

**CAMERA ANGLE: EASTERLY** 

## Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## **WELL PAD - NBU 921-251**

LOCATION PHOTOS
NBU 921-2514DS,
NBU 921-2514AS, NBU 921-2512AS,
NBU 921-25IT & NBU 921-25H3DS
LOCATED IN SECTION 25, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH.



## CONSULTING, LLC

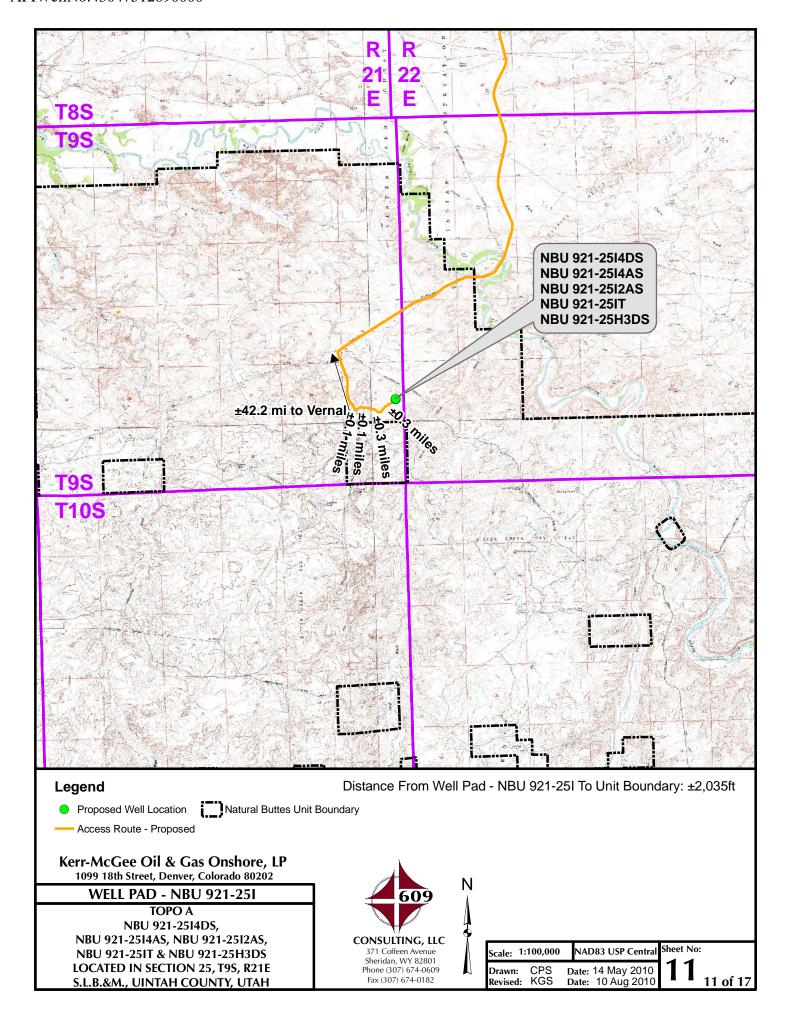
371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

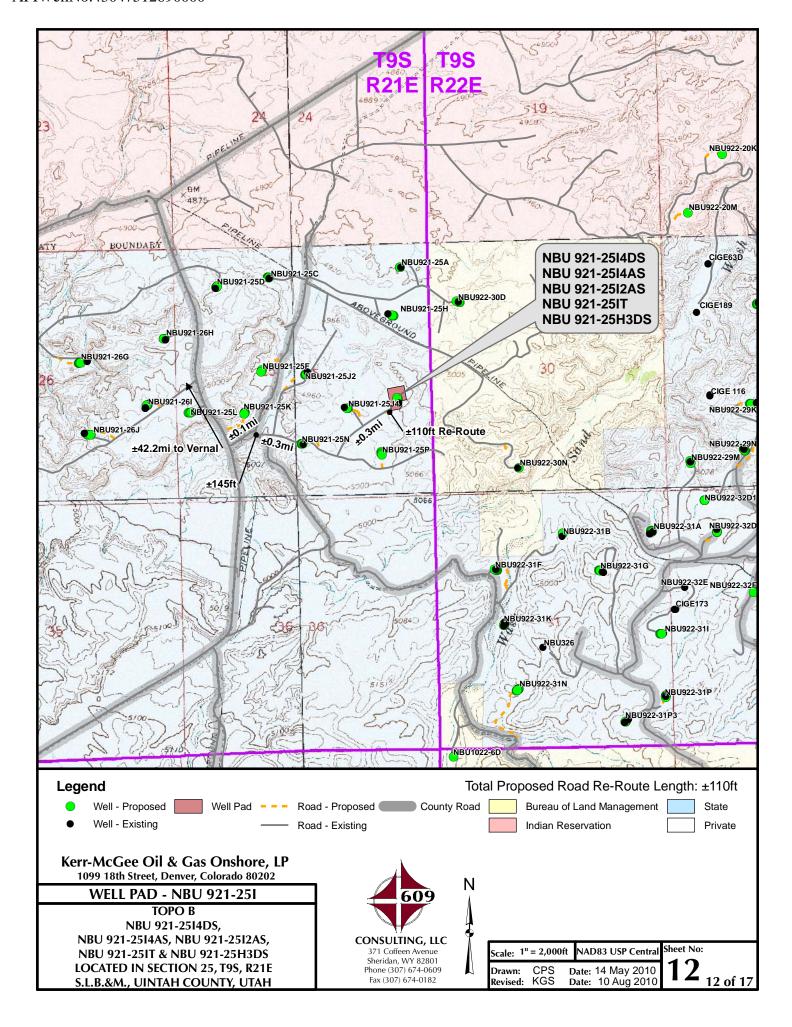
## TIMBERLINE

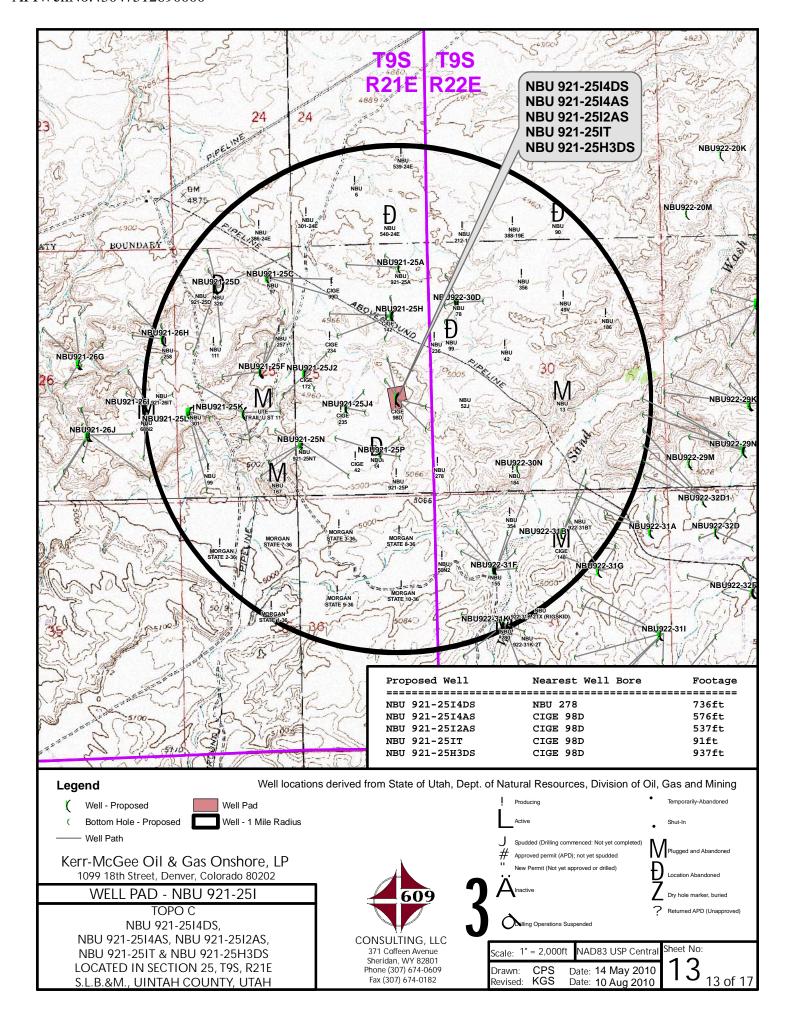
(435) 789-1365

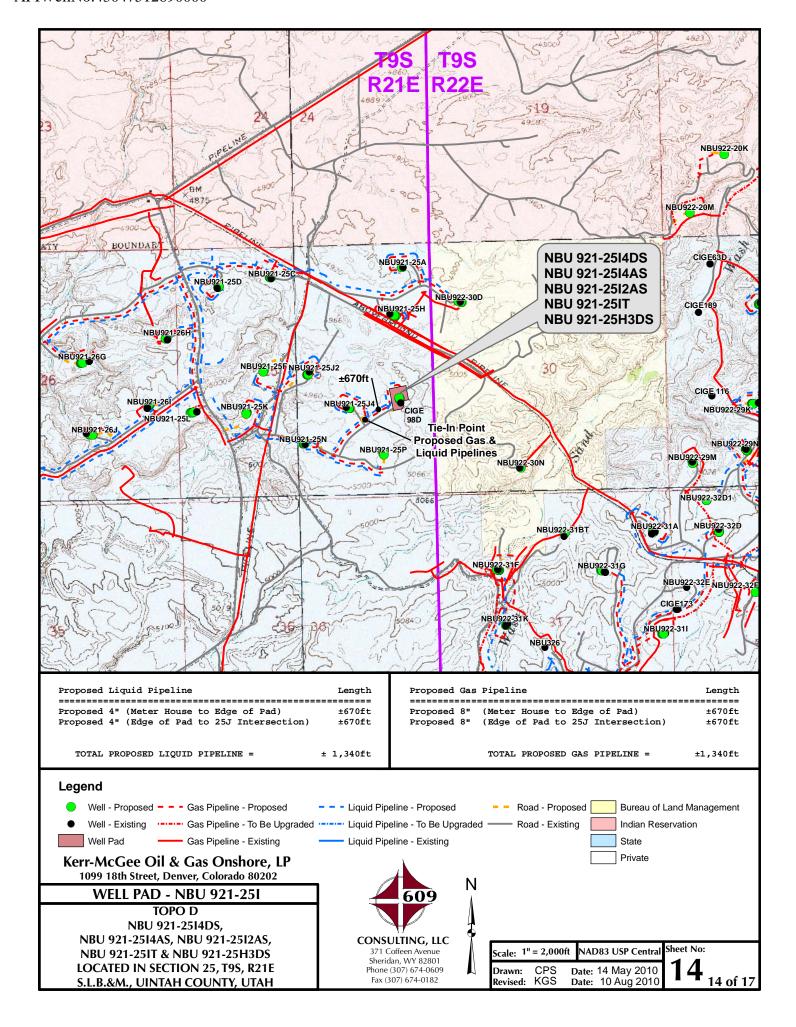
ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

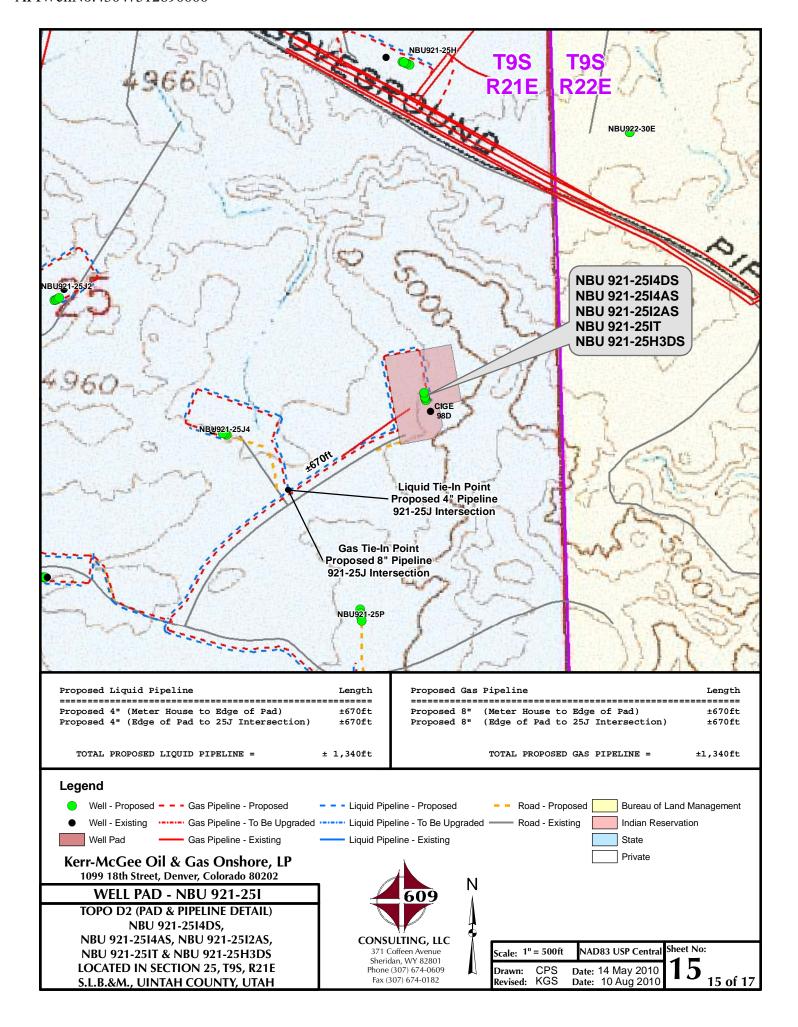
- 1			
	DATE PHOTOS TAKEN: 04-01-10	PHOTOS TAKEN BY: D.J.S.	SHEET NO:
	DATE DRAWN: 04-05-10	DRAWN BY: E.M.S.	10
	Date Last Revised: 08-04-1	0 M.W.W.	10 OF 17

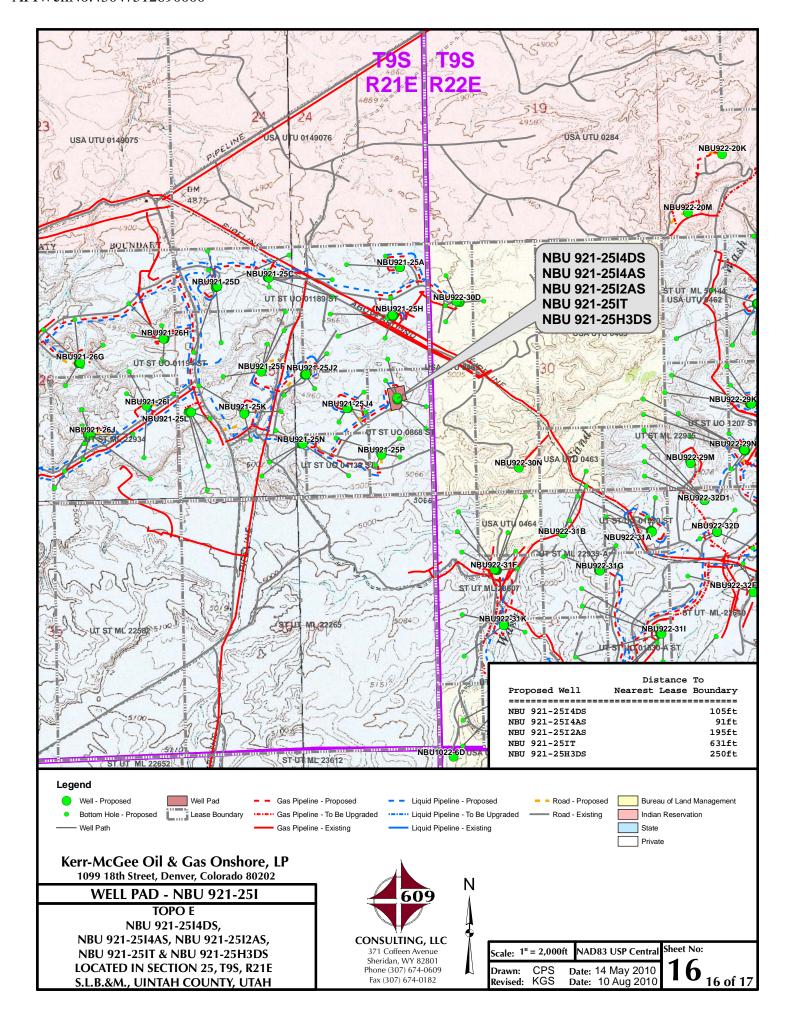








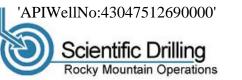




## Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 921-25I WELLS – NBU 921-25I4DS, NBU 921-25I4AS, NBU 921-25I2AS, NBU 921-25IT & NBU 921-25H3DS Section 25, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 145 feet to a service road to the east. Exit left and proceed in an easterly then southeasterly direction along service road approximately 0.3 miles to a second service road approximately 0.3 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 42.9 miles in a southerly direction.

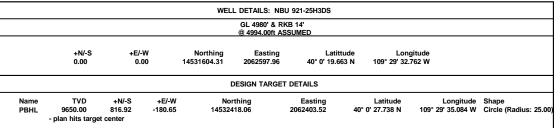


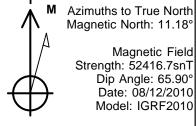
Project: Uintah County, UT UTM12

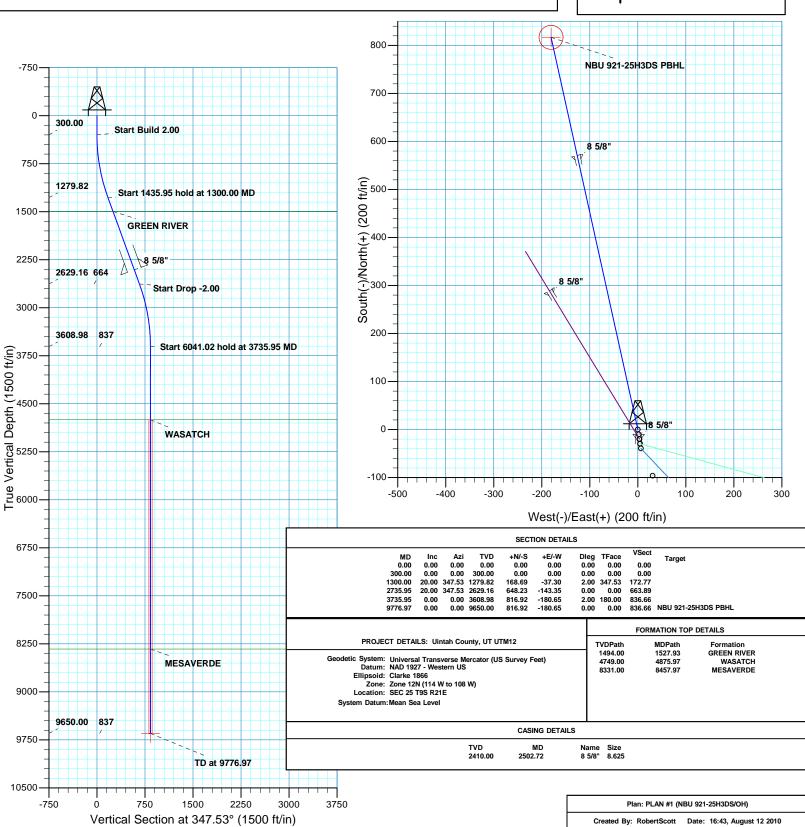
Site: NBU 921-25I Pad Well: NBU 921-25H3DS

Wellbore: OH Design: PLAN #1











# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 921-25I Pad NBU 921-25H3DS

OH

Plan: PLAN #1

## **Standard Planning Report**

12 August, 2010





## SDI Planning Report



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

**TVD Reference:** 

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

True

North Reference: **Survey Calculation Method:** 

Minimum Curvature

Site: Well:

Project:

Company:

NBU 921-25I Pad NBU 921-25H3DS

Wellbore: Design:

OH PLAN #1

Project Uintah County, UT UTM12

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US Geo Datum:

Mean Sea Level System Datum:

Map Zone: Zone 12N (114 W to 108 W)

Site NBU 921-25I Pad, SEC 25 T9S R21E

14,531,604.32 usft Site Position: Northing: Latitude: 40° 0' 19.663 N From: Lat/Long Easting: 2,062,597.96 usft Longitude: 109° 29' 32.762 W

**Position Uncertainty:** 0.00 ft Slot Radius: 13.200 in **Grid Convergence:** 0.97

NBU 921-25H3DS, 2035' FSL 684' FEL Well

**Well Position** +N/-S 0.00 ft 14,531,604.32 usft Latitude: 40° 0' 19.663 N Northing:

0.00 ft 2,062,597.96 usft 109° 29' 32.762 W +E/-W Easting: Longitude:

0.00 ft 4,980.00 ft **Position Uncertainty** Wellhead Elevation: **Ground Level:** 

Wellbore ОН Sample Date Declination Dip Angle Field Strength Magnetics **Model Name** (°) (°) (nT) IGRF2010 08/12/2010 65.90 11.18 52,417

Design PLAN #1 **Audit Notes:** PLAN Tie On Depth: 0.00 Version: Phase: **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 347.53

Plan Sections										_
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	347.53	1,279.82	168.69	-37.30	2.00	2.00	0.00	347.53	
2,735.95	20.00	347.53	2,629.16	648.23	-143.35	0.00	0.00	0.00	0.00	
3,735.95	0.00	0.00	3,608.98	816.92	-180.65	2.00	-2.00	0.00	180.00	
9,776.97	0.00	0.00	9,650.00	816.92	-180.65	0.00	0.00	0.00	0.00	NBU 921-25H3DS PE



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

North Reference: True

Minimum Curvature **Survey Calculation Method:** 

Site:

Project:

Company:

NBU 921-25I Pad NBU 921-25H3DS Well:

Wellbore: ОН PLAN #1 Design:

ned Surv	rey									
Dej	sured pth ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100 <del>ft</del> )
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
:	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
;	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Star	rt Build 2.	00								
	400.00	2.00	347.53	399.98	1.70	-0.38	1.75	2.00	2.00	0.00
				333.30				2.00		0.00
	500.00	4.00	347.53	499.84	6.81	-1.51	6.98	2.00	2.00	0.00
(	600.00	6.00	347.53	599.45	15.32	-3.39	15.69	2.00	2.00	0.00
	700.00	8.00	347.53	698.70	27.22	-6.02	27.88	2.00	2.00	0.00
	800.00	10.00	347.53	797.47	42.50	-9.40	43.52	2.00	2.00	0.00
9	900.00	12.00	347.53	895.62	61.13	-13.52	62.60	2.00	2.00	0.00
	000.00		0.47.50	000.00	00.00	40.07	05.40	0.00	0.00	0.00
	00.00	14.00	347.53	993.06	83.09	-18.37	85.10	2.00	2.00	0.00
	100.00	16.00	347.53	1,089.64	108.36	-23.96	110.98	2.00	2.00	0.00
	200.00	18.00	347.53	1,185.27	136.91	-30.28	140.21	2.00	2.00	0.00
	300.00	20.00	347.53	1,279.82	168.69	-37.30	172.77	2.00	2.00	0.00
Star	rt 1435.95	hold at 1300.00	MD							
4,1	400.00	20.00	347.53	1,373.78	202.09	-44.69	206.97	0.00	0.00	0.00
1 /	500.00	20.00	347.53	1,467.75	235.48	-52.07	241.17	0.00	0.00	0.00
	527.93	20.00	347.53	1,494.00	244.81	-54.14	250.72	0.00	0.00	0.00
			347.33	1,494.00	244.01	-54.14	230.72	0.00	0.00	0.00
	EN RIVE									
	600.00	20.00	347.53	1,561.72	268.88	-59.46	275.37	0.00	0.00	0.00
	700.00	20.00	347.53	1,655.69	302.27	-66.84	309.58	0.00	0.00	0.00
1,8	800.00	20.00	347.53	1,749.66	335.67	-74.23	343.78	0.00	0.00	0.00
1.9	900.00	20.00	347.53	1,843.63	369.06	-81.61	377.98	0.00	0.00	0.00
	000.00	20.00	347.53	1,937.60	402.46	-89.00	412.18	0.00	0.00	0.00
	100.00	20.00	347.53	2,031.57	435.85	-96.38	446.38	0.00	0.00	0.00
	200.00	20.00	347.53	2,125.54	469.25	-103.77	480.59	0.00	0.00	0.00
	300.00	20.00	347.53	2,219.51	502.64	-111.15	514.79	0.00	0.00	0.00
	400.00	20.00	347.53	2,313.48	536.04	-118.54	548.99	0.00	0.00	0.00
	500.00	20.00	347.53	2,407.45	569.43	-125.92	583.19	0.00	0.00	0.00
2,	502.72	20.00	347.53	2,410.00	570.34	-126.13	584.12	0.00	0.00	0.00
8 5/8	8"									
2,0	600.00	20.00	347.53	2,501.42	602.83	-133.31	617.39	0.00	0.00	0.00
2,	700.00	20.00	347.53	2,595.39	636.23	-140.69	651.60	0.00	0.00	0.00
	735.95	20.00	347.53	2,629.16	648.23	-143.35	663.89	0.00	0.00	0.00
	t Drop -2.									
	800.00	18.72	347.53	2,689.59	668.96	-147.93	685.12	2.00	-2.00	0.00
	900.00	16.72	347.53	2,784.85	698.68	-154.51	715.56	2.00	-2.00	0.00
	00.00	14.72	347.53	2,881.10	725.13	-160.35	742.65	2.00	-2.00	0.00
3,	100.00	12.72	347.53	2,978.24	748.28	-165.48	766.36	2.00	-2.00	0.00
3 1	200.00	10.72	347.53	3,076.15	768.11	-169.86	786.67	2.00	-2.00	0.00
	300.00	8.72	347.53	3,174.71	784.60	-173.51	803.55	2.00	-2.00	0.00
	400.00	6.72	347.53	3,273.80	797.71	-176.41	816.98	2.00	-2.00	0.00
	500.00	4.72	347.53	3,373.30	807.44	-178.56	826.95	2.00	-2.00	0.00
	600.00	2.72	347.53	3,473.08	813.77	-179.96	833.43	2.00	-2.00	0.00
3,0	000.00	2.12				-113.30				
	700.00	0.72	347.53	3,573.03	816.70	-180.61	836.43	2.00	-2.00	0.00
3,	735.95	0.00	0.00	3,608.98	816.92	-180.65	836.66	2.00	-2.00	0.00
Star	t 6041.02	hold at 3735.95	5 MD							
	800.00	0.00	0.00	3,673.03	816.92	-180.65	836.66	0.00	0.00	0.00
	900.00	0.00	0.00	3,773.03	816.92	-180.65	836.66	0.00	0.00	0.00



Project:

## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

North Reference:

**Survey Calculation Method:** 

True

Minimum Curvature

NBU 921-25I Pad Site:

NBU 921-25H3DS Well: Wellbore: ОН

PLAN #1 Design:

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,000.00	0.00	0.00	3,873.03	816.92	-180.65	836.66	0.00	0.00	0.00
4,100.00 4,200.00 4,300.00 4,400.00 4,500.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	3,973.03 4,073.03 4,173.03 4,273.03 4,373.03	816.92 816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
4,600.00 4,700.00 4,800.00 4,875.97	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	4,473.03 4,573.03 4,673.03 4,749.00	816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
WASATCH	0.00	0.00	4.770.00	040.00	400.05	000.00	0.00	0.00	0.00
4,900.00 5,000.00 5,100.00 5,200.00 5,300.00 5,400.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	4,773.03 4,873.03 4,973.03 5,073.03 5,173.03 5,273.03	816.92 816.92 816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00
5,500.00 5,600.00 5,700.00 5,800.00 5,900.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	5,373.03 5,473.03 5,573.03 5,673.03 5,773.03	816.92 816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
6,000.00 6,100.00 6,200.00 6,300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	5,873.03 5,973.03 6,073.03 6,173.03	816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
6,400.00 6,500.00 6,600.00	0.00 0.00 0.00	0.00 0.00 0.00	6,273.03 6,373.03 6,473.03	816.92 816.92 816.92	-180.65 -180.65 -180.65	836.66 836.66 836.66	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
6,700.00 6,800.00 6,900.00 7,000.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	6,573.03 6,673.03 6,773.03 6,873.03	816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65	836.66 836.66 836.66	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,100.00 7,200.00 7,300.00 7,400.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	6,973.03 7,073.03 7,173.03 7,273.03	816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
7,500.00 7,600.00 7,700.00 7,800.00 7,900.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,373.03 7,473.03 7,573.03 7,673.03 7,773.03	816.92 816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,000.00 8,100.00 8,200.00 8,300.00 8,400.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	7,873.03 7,973.03 8,073.03 8,173.03 8,273.03	816.92 816.92 816.92 816.92 816.92	-180.65 -180.65 -180.65 -180.65 -180.65	836.66 836.66 836.66 836.66	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
8,457.97 <b>MESAVERDI</b> 8,500.00	0.00	0.00	8,331.00 8,373.03	816.92 816.92	-180.65 -180.65	836.66 836.66	0.00	0.00	0.00



## **SDI** Planning Report



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Local Co-ordinate Reference:

TVD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

Project: Uintah County, UT UTM12

MD Reference:

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

North Reference:

Minimum Curvature **Survey Calculation Method:** 

True

Site:

Company:

NBU 921-25I Pad NBU 921-25H3DS Well:

Wellbore: ОН PLAN #1 Design:

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,600.00	0.00	0.00	8,473.03	816.92	-180.65	836.66	0.00	0.00	0.00
8,700.00	0.00	0.00	8,573.03	816.92	-180.65	836.66	0.00	0.00	0.00
8,800.00	0.00	0.00	8,673.03	816.92	-180.65	836.66	0.00	0.00	0.00
8,900.00	0.00	0.00	8,773.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,000.00	0.00	0.00	8,873.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,100.00	0.00	0.00	8,973.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,200.00	0.00	0.00	9,073.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,300.00	0.00	0.00	9,173.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,400.00	0.00	0.00	9,273.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,500.00	0.00	0.00	9,373.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,600.00	0.00	0.00	9,473.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,700.00	0.00	0.00	9,573.03	816.92	-180.65	836.66	0.00	0.00	0.00
9,776.97	0.00	0.00	9,650.00	816.92	-180.65	836.66	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NBU 921-25H3DS PBHL - plan hits target cent - Circle (radius 25.00		0.00	9,650.00	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W

Casing Points					
	Measured	Vertical		Casing	Hole
	Depth	Depth		Diameter	Diameter
	(ft)	(ft)	Name	(in)	(in)
	2,502.72	2,410.00 8 5	,"	8.625	11.000

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,527.93 4,875.97 8,457.97	4,749.00	GREEN RIVER WASATCH MESAVERDE				



# **SDI**Planning Report



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14'

TVD Reference:

@ 4994.00ft (ASSUMED

MD Reference:

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

) True

North Reference: Survey Calculation Method:

Minimum Curvature

Site: Well:

Company:

Project:

NBU 921-25I Pad NBU 921-25H3DS

Wellbore: OH
Design: PLAN #1

Plan Annotations				
Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S	+E/-W	Command
(It)	(11)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	168.69	-37.30	Start 1435.95 hold at 1300.00 MD
2,735.95	2,629.16	648.23	-143.35	Start Drop -2.00
3,735.95	3,608.98	816.92	-180.65	Start 6041.02 hold at 3735.95 MD
9,776.97	9,650.00	816.92	-180.65	TD at 9776.97



# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 921-25I Pad NBU 921-25H3DS

OH

Plan: PLAN #1

## **Standard Planning Report - Geographic**

12 August, 2010





Project:

Geo Datum:

## SDI Planning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

**TVD Reference:** 

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

True

NBU 921-25I Pad Site:

NBU 921-25H3DS Well:

Wellbore: OH PLAN #1 Design:

North Reference:

**Survey Calculation Method:** 

Minimum Curvature

65.90

52,417

Uintah County, UT UTM12 Project

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US

System Datum:

Mean Sea Level

Map Zone: Zone 12N (114 W to 108 W)

Site NBU 921-25I Pad, SEC 25 T9S R21E

Northing: 14,531,604.32 usft 40° 0' 19.663 N Site Position: Latitude: 2,062,597.96 usft Longitude: 109° 29' 32.762 W From: Lat/Long Easting:

Grid Convergence: 0.00 ft 0.97 **Position Uncertainty:** Slot Radius: 13.200 in

Well NBU 921-25H3DS, 2035' FSL 684' FEL

IGRF2010

Well Position +N/-S 0.00 ft Northing: 14,531,604.32 usft Latitude: 40° 0' 19.663 N

> +E/-W 0.00 ft Easting: 2,062,597.96 usft Longitude: 109° 29' 32.762 W

> > 11.18

**Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 4.980.00 ft

Wellbore OH Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (°) (°) (nT)

PLAN #1 Design **Audit Notes:** PLAN Tie On Depth: 0.00 Version: Phase: Depth From (TVD) +N/-S **Vertical Section:** +E/-W Direction

(ft) (ft) (ft) (°) 0.00 0.00 0.00 347.53

08/12/2010

**Plan Sections** Vertical Build Measured Dogleg Turn Depth Inclination Azimuth Depth +N/-S +E/-W Rate Rate Rate TFO (°/100ft) (°/100ft) (°/100ft) (ft) (°) (°) (ft) (ft) (ft) **Target** (°) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 300.00 0.00 0.00 300.00 0.00 0.00 0.00 0.00 0.00 0.00 20.00 -37.30 0.00 347.53 1,300.00 347.53 1,279.82 168.69 2.00 2.00 0.00 0.00 0.00 2,735.95 20.00 347.53 2,629.16 648.23 -143.35 0.00 2.00 0.00 3,735.95 0.00 0.00 3,608.98 816.92 -180.65-2.00180.00 9,776.97 0.00 0.00 9,650.00 816.92 -180.65 0.00 0.00 0.00 0.00 NBU 921-25H3DS PE



Project:

Site:

## **SDI** Planning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 921-25I Pad

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

True

North Reference:

**Survey Calculation Method:** 

Minimum Curvature

Well:	NBU 921-25H3DS
Wellbore:	ОН
Design:	PLAN #1

nned Survey									
-									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,531,604.32	2,062,597.96	40° 0' 19.663 N	109° 29' 32.762 V
100.00	0.00	0.00	100.00	0.00	0.00	14,531,604.32	2,062,597.96	40° 0' 19.663 N	109° 29' 32.762 '
200.00	0.00	0.00	200.00	0.00	0.00	14,531,604.32	2,062,597.96	40° 0' 19.663 N	109° 29' 32.762
300.00	0.00	0.00	300.00	0.00	0.00	14,531,604.32	2,062,597.96	40° 0' 19.663 N	109° 29' 32.762
Start Bui		0.47.50	200.00	4 70	0.00	11 501 000 01	0.000 507 55	100 01 10 000 11	1000 001 00 707
400.00	2.00	347.53	399.98	1.70	-0.38	14,531,606.01	2,062,597.55	40° 0' 19.680 N	109° 29' 32.767
500.00 600.00	4.00	347.53 347.53	499.84	6.81 15.32	-1.51 -3.39	14,531,611.10	2,062,596.34 2,062,594.31	40° 0' 19.731 N	109° 29' 32.782 109° 29' 32.806
700.00	6.00 8.00	347.53	599.45 698.70	27.22	-3.39 -6.02	14,531,619.58 14,531,631.43	2,062,594.31	40° 0' 19.815 N 40° 0' 19.932 N	109° 29' 32.840
800.00	10.00	347.53	797.47	42.50	-9.40	14,531,646.65	2,062,587.84	40° 0' 20.083 N	109° 29' 32.883
900.00	12.00	347.53	895.62	61.13	-13.52	14,531,665.21	2,062,583.41	40° 0' 20.267 N	109° 29' 32.936
1,000.00	14.00	347.53	993.06	83.09	-18.37	14,531,687.08	2,062,578.18	40° 0' 20.484 N	109° 29' 32.999
1,100.00	16.00	347.53	1,089.64	108.36	-23.96	14,531,712.26	2,062,572.17	40° 0' 20.734 N	109° 29' 33.070
1,200.00	18.00	347.53	1,185.27	136.91	-30.28	14,531,740.69	2,062,565.37	40° 0' 21.016 N	109° 29' 33.152
1,300.00	20.00	347.53	1,279.82	168.69	-37.30	14,531,772.35	2,062,557.81	40° 0' 21.331 N	109° 29' 33.242
Start 143	35.95 hold at 1	300.00 MD							
1,400.00	20.00	347.53	1,373.78	202.09	-44.69	14,531,805.62	2,062,549.86	40° 0' 21.661 N	109° 29' 33.337
1,500.00	20.00	347.53	1,467.75	235.48	-52.07	14,531,838.88	2,062,541.91	40° 0' 21.991 N	109° 29' 33.432
1,527.93	20.00	347.53	1,494.00	244.81	-54.14	14,531,848.18	2,062,539.69	40° 0' 22.083 N	109° 29' 33.458
GREEN I	RIVER								
1,600.00	20.00	347.53	1,561.72	268.88	-59.46	14,531,872.15	2,062,533.96	40° 0' 22.321 N	109° 29' 33.527
1,700.00	20.00	347.53	1,655.69	302.27	-66.84	14,531,905.42	2,062,526.01	40° 0' 22.651 N	109° 29' 33.622
1,800.00	20.00	347.53	1,749.66	335.67	-74.23	14,531,938.68	2,062,518.06	40° 0' 22.981 N	109° 29' 33.716
1,900.00	20.00	347.53	1,843.63	369.06	-81.61	14,531,971.95	2,062,510.11	40° 0' 23.311 N	109° 29' 33.811
2,000.00	20.00 20.00	347.53 347.53	1,937.60 2,031.57	402.46 435.85	-89.00 -96.38	14,532,005.21	2,062,502.16	40° 0' 23.641 N 40° 0' 23.971 N	109° 29' 33.906 109° 29' 34.001
2,100.00 2,200.00	20.00	347.53	2,031.57	435.65	-96.36 -103.77	14,532,038.48 14,532,071.74	2,062,494.21 2,062,486.27	40° 0' 24.301 N	109° 29' 34.096
2,300.00	20.00	347.53	2,123.54	502.64	-111.15	14,532,105.01	2,062,478.32	40° 0' 24.632 N	109° 29' 34.191
2,400.00	20.00	347.53	2,313.48	536.04	-118.54	14,532,138.27	2,062,470.37	40° 0' 24.962 N	109° 29' 34.286
2,500.00	20.00	347.53	2,407.45	569.43	-125.92	14,532,171.54	2,062,462.42	40° 0' 25.292 N	109° 29' 34.381
2,502.72	20.00	347.53	2,410.00	570.34	-126.13	14,532,172.44	2,062,462.20	40° 0' 25.301 N	109° 29' 34.384
8 5/8"									
2,600.00	20.00	347.53	2,501.42	602.83	-133.31	14,532,204.80	2,062,454.47	40° 0' 25.622 N	109° 29' 34.476
2,700.00	20.00	347.53	2,595.39	636.23	-140.69	14,532,238.07	2,062,446.52	40° 0' 25.952 N	109° 29' 34.571
2,735.95	20.00	347.53	2,629.16	648.23	-143.35	14,532,250.03	2,062,443.66	40° 0' 26.071 N	109° 29' 34.605
Start Dro	p -2.00								
2,800.00	18.72	347.53	2,689.59	668.96	-147.93	14,532,270.68	2,062,438.73	40° 0' 26.275 N	109° 29' 34.664
2,900.00	16.72	347.53	2,784.85	698.68	-154.51	14,532,300.28	2,062,431.66	40° 0' 26.569 N	109° 29' 34.748
3,000.00	14.72	347.53	2,881.10	725.13	-160.35	14,532,326.63	2,062,425.36	40° 0' 26.831 N	109° 29' 34.823
3,100.00	12.72	347.53	2,978.24	748.28	-165.48	14,532,349.69	2,062,419.85	40° 0' 27.060 N	109° 29' 34.889
3,200.00	10.72	347.53	3,076.15	768.11	-169.86	14,532,369.45	2,062,415.13	40° 0' 27.256 N	109° 29' 34.946
3,300.00	8.72	347.53	3,174.71	784.60	-173.51	14,532,385.87	2,062,411.21	40° 0' 27.418 N	109° 29' 34.993
3,400.00 3,500.00	6.72 4.72	347.53 347.53	3,273.80 3,373.30	797.71 807.44	-176.41 -178.56	14,532,398.93 14,532,408.62	2,062,408.08 2,062,405.77	40° 0' 27.548 N 40° 0' 27.644 N	109° 29' 35.030 109° 29' 35.057
3,600.00	2.72	347.53	3,473.08	813.77	-176.56 -179.96	14,532,406.62	2,062,404.26	40° 0' 27.707 N	109° 29' 35.057
3,700.00	0.72	347.53	3,573.03	816.70	-180.61	14,532,417.85	2,062,403.56	40° 0' 27.736 N	109° 29' 35.084
3,735.95	0.00	0.00	3,608.98	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084
	11.02 hold at 3		2,200.00		. 50.00	,,	_,,		
3,800.00	0.00	0.00	3,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084
3,900.00	0.00	0.00	3,773.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084



Project:

## **SDI** Planning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

North Reference: True

**Survey Calculation Method:** 

Minimum Curvature

NBU 921-25I Pad Site: NBU 921-25H3DS Well:

Wellbore: ОН PLAN #1 Design:

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,000.00	0.00	0.00	3,873.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084
4,100.00	0.00	0.00	3,973.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084
4,200.00	0.00	0.00	4,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084
4,300.00	0.00	0.00	4,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,400.00	0.00	0.00	4,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,500.00	0.00	0.00	4,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,600.00	0.00	0.00	4,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,700.00	0.00	0.00	4,573.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,800.00	0.00	0.00	4,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
4,875.97	0.00	0.00	4,749.00	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
WASATO	Н								
4,900.00	0.00	0.00	4,773.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,000.00	0.00	0.00	4,873.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,100.00	0.00	0.00	4,973.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,200.00	0.00	0.00	5,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,300.00	0.00	0.00	5,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,400.00	0.00	0.00	5,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,500.00	0.00	0.00	5,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,600.00	0.00	0.00	5,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,700.00	0.00	0.00	5,573.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,800.00	0.00	0.00	5,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
5,900.00	0.00	0.00	5,773.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,000.00	0.00	0.00	5,873.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,100.00	0.00	0.00	5,973.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,200.00	0.00	0.00	6,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,300.00	0.00	0.00	6,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,400.00	0.00	0.00	6,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,500.00	0.00	0.00	6,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,600.00	0.00	0.00	6,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,700.00	0.00	0.00	6,573.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,800.00	0.00	0.00	6,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
6,900.00	0.00	0.00	6,773.03	816.92 816.92	-180.65 -180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
7,000.00 7,100.00	0.00 0.00	0.00 0.00	6,873.03 6,973.03	816.92	-180.65	14,532,418.06	2,062,403.51 2,062,403.51	40° 0' 27.738 N 40° 0' 27.738 N	109° 29' 35.08 109° 29' 35.08
7,100.00	0.00	0.00	7,073.03	816.92	-180.65	14,532,418.06 14,532,418.06	2,062,403.51	40° 0' 27.738 N	109 29 35.08 109° 29' 35.08
7,200.00	0.00	0.00	7,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
7,300.00	0.00	0.00	7,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
7,500.00	0.00	0.00	7,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109 29 35.06 109° 29' 35.08
7,500.00	0.00	0.00	7,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109 29 35.06 109° 29' 35.08
7,700.00	0.00	0.00	7,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
7,700.00	0.00	0.00	7,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
7,900.00	0.00	0.00	7,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,000.00	0.00	0.00	7,773.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,100.00	0.00	0.00	7,973.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,200.00	0.00	0.00	8,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,300.00	0.00	0.00	8,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,400.00	0.00	0.00	8,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
8,457.97	0.00	0.00	8,331.00	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08
MESAVE		0.00	0,001.00	010.02	130.00	11,002,410.00	2,002,700.01	10 0 21.100 1	100 20 00.00
8,500.00	0.00	0.00	8,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.08



## **SDI** Planning Report - Geographic



Database: EDM5000-RobertS-Local

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED GL 4980' & RKB 14'

@ 4994.00ft (ASSUMED

North Reference: True

**Survey Calculation Method:** 

Minimum Curvature

Site: Well:

Company:

Project:

NBU 921-25I Pad NBU 921-25H3DS

Wellbore: ОН PLAN #1 Design:

Planned Survey	,								
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,600.00	0.00	0.00	8,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
8,700.00	0.00	0.00	8,573.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
8,800.00	0.00	0.00	8,673.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
8,900.00	0.00	0.00	8,773.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,000.00	0.00	0.00	8,873.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,100.00	0.00	0.00	8,973.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,200.00	0.00	0.00	9,073.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,300.00	0.00	0.00	9,173.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,400.00	0.00	0.00	9,273.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,500.00	0.00	0.00	9,373.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,600.00	0.00	0.00	9,473.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,700.00	0.00	0.00	9,573.03	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
9,776.97	0.00	0.00	9,650.00	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W
TD at 97	76.97 - NBU 9	21-25H3DS P	BHL						

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NBU 921-25H3DS PBH - plan hits target ce - Circle (radius 25.0	nter	0.00	9,650.00	816.92	-180.65	14,532,418.06	2,062,403.51	40° 0' 27.738 N	109° 29' 35.084 W

- pian nits target	Center
- Circle (radius 2	25.00)

Casing Points							
	Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (in)	Hole Diameter (in)	
	2,502.72	2,410.00	8 5/8"		8.625	11.000	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	1,527.93 4,875.97 8,457.97	4,735.00	GREEN RIVER WASATCH MESAVERDE				



# **SDI**Planning Report - Geographic



Database: EDM5000-RobertS-Local

OH PLAN #1

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

NBU 921-25I Pad

NBU 921-25H3DS

Local Co-ordinate Reference:

TVD Reference:

Well NBU 921-25H3DS GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

)

MD Reference: Gi

GL 4980' & RKB 14' @ 4994.00ft (ASSUMED

) True

North Reference:

**Survey Calculation Method:** 

Minimum Curvature

Plan Annotations

Company:

Project:

Site:

Well:

Wellbore:

Design:

Measured	Vertical	Local Coordinates		
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	168.69	-37.30	Start 1435.95 hold at 1300.00 MD
2,735.95	2,629.16	648.23	-143.35	Start Drop -2.00
3,735.95	3,608.98	816.92	-180.65	Start 6041.02 hold at 3735.95 MD
9,776.97	9,650.00	816.92	-180.65	TD at 9776.97

# **NBU 921-25H3DS**

Surface: 2,074' FSL 690' FEL (NE/4SE/4) BHL: 2,395' FNL 870' FEL (SE/4NE/4) Mineral Lease: UO 1189 ST

# **NBU 921-2512AS**

Surface: 2,054' FSL 687' FEL (NE/4SE/4) BHL: 2,445' FSL 924' FEL (NE/4SE/4) Mineral Lease: UO 0868 ST

# **NBU 921-25I4AS**

Surface: 2,045' FSL 686' FEL (NE/4SE/4) BHL: 1,882' FSL 91' FEL (NE/4SE/4) Mineral Lease: UO 0868 ST

# NBU 921-25I4DS

Surface: 2,035' FSL 684' FEL (NE/4SE/4) BHL: 1,420' FSL 105' FEL (NE/4SE/4) Mineral Lease: UO 0868 ST

# **NBU 921-25IT**

Monitor Well 2,064' FSL 689' FEL (NE/4SE/4) Mineral Lease: UO 0868 ST

> Pad: NBU 921-25I Section 25 T9S R21E

Uintah County, Utah Operator: Kerr-McGee Oil & Gas Onshore LP

# MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

# A. <u>Existing Roads</u>:

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain

existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

# **B.** Planned Access Roads:

Approximately  $\pm 110$ ' (0.02 miles) of road re-route to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

# C. <u>Location of Existing and Proposed Facilities</u>:

This pad will expand the existing pad for the CIGE 98D, which is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 16, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM. Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,340$ ' and the individual segments are broken up as follows:

 $\pm 670$ ' (0.1 miles) –New 8" buried gas pipeline from the meter to the edge of the pad.  $\pm 670$ ' (0.1 miles) –New 8" buried gas pipeline from the edge of pad to the NBU 921-25J pad intersection.

The total liquid gathering pipeline distance from the meter to the tie in point is  $\pm 1,340$ ' and the individual segments are broken up as follows:

±670' (0.1 miles) –New 4" buried liquid pipeline from the meter to the edge of the pad. ±670' (0.1 miles) –New 4" buried liquid pipeline from the edge of pad to the NBU 921-25J pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

# D. <u>Location and Type of Water Supply</u>:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B. No water well is to be drilled on this lease.

# **E.** Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

# F. <u>Methods of Handling Waste Materials</u>:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E

Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E

Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should

petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

# **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

# G. <u>Ancillary Facilities</u>:

Please note that the NBU 921-25IT well is going to be developed as a pressure monitoring well.

# H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

# I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

# **Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

### **Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

# Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for revegetation. The site specific seed mix will be provided by SITLA.

# J. Surface/Mineral Ownership:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

# **K.** Other Information:

A Class I literature survey was conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125

A paleontological reconnaissance has been conducted by Intermountain Paleo-Consulting (IPC) and a report will be submitted under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-291.

# 'APIWellNo:43047512690000'

# M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst I Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

August 16, 2010

Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 36 PROPOSED WELL LOCATIONS IN T9S, R21E, SECTION 25 (MOAC Report No. 10-125) UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

State of Utah
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 10-125

July 26, 2010

State of Utah Public Lands Policy Coordination Office Permit No. 117

United States Department of Interior (FLPMA)
Permit No. 10-UT-60122



# **Grasslands Consulting, Inc.**

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

# SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

**Report Number:** GCI #291

Report Date: August 3, 2010

Operator: Kerr-McGee Oil & Gas Onshore LP

Well: NBU 921-25I well pad (Bores: NBU 921-25H3DS, NBU 921-25I2AS, NBU 921-25I4AS,

NBU 921-25I4DS, and NBU 921-25IT)

**Pipeline:** Associated pipeline leading to proposed well pad

Access Road: Associated road leading to proposed well pad

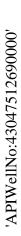
Location: Section 25, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

Survey Date: July 13, 2010

**Observers:** Grasslands Consulting, Inc. Biologists: Brad Snopek, Jennie Sinclair, Jonathan

Sexauer, Adrienne Cunningham, Garrett Peterson and field technicians.





Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

# August 11, 2010

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 921-25H3DS

T9S-R21E

Section 25: NESE surface, SENE bottom hole

Surface: 2074' FSL, 690' FEL Bottom Hole: 2395' FNL, 870' FEL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-25H3DS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance.
   Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

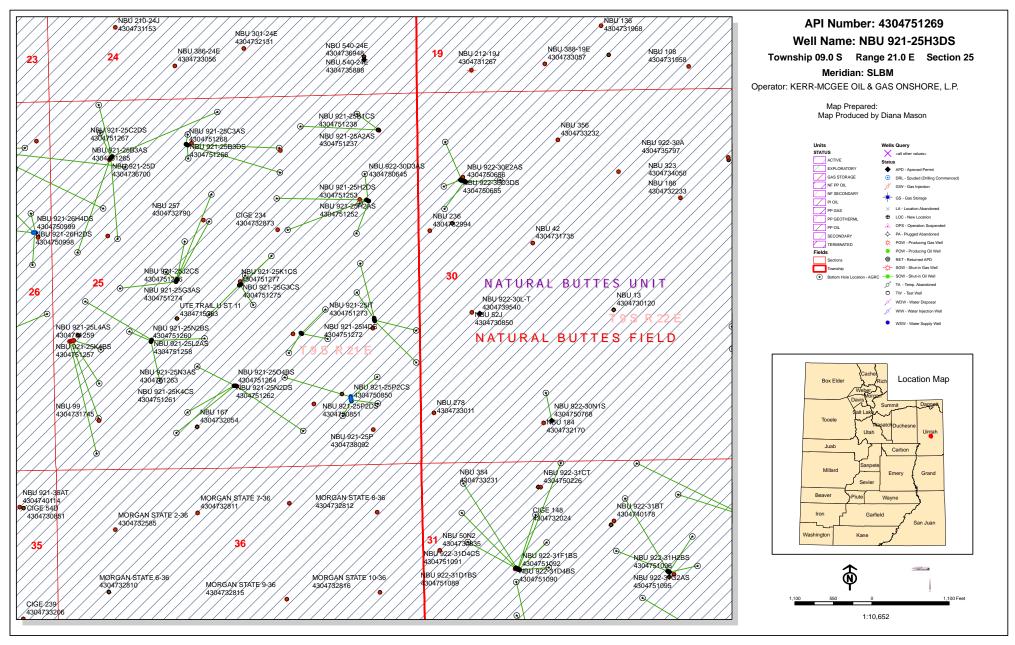
Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman



# **United States Department of the Interior**

# BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

August 17, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit

Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

# NBU 921-25A Pad

43-047-51237 NBU 921-25A2AS Sec 25 T09S R21E 0489 FNL 0565 FEL BHL Sec 25 T09S R21E 0252 FNL 0865 FEL

43-047-51238 NBU 921-25B1CS Sec 25 T09S R21E 0489 FNL 0575 FEL BHL Sec 25 T09S R21E 0416 FNL 1676 FEL

#### NBU 921-25D Pad

43-047-51239 NBU 921-25C1AS Sec 25 T09S R21E 0800 FNL 0893 FWL BHL Sec 25 T09S R21E 0190 FNL 2405 FWL

43-047-51240 NBU 921-25D1BS Sec 25 T09S R21E 0807 FNL 0885 FWL BHL Sec 25 T09S R21E 0060 FNL 0716 FWL

43-047-51241 NBU 921-25E1CS Sec 25 T09S R21E 0821 FNL 0871 FWL

BHL Sec 25 T09S R21E 1976 FNL 0947 FWL

43-047-51242 NBU 921-25E3AS Sec 25 T09S R21E 0828 FNL 0864 FWL

BHL Sec 25 T09S R21E 2162 FNL 0371 FWL

43-047-51251 NBU 921-25D1CS Sec 25 T09S R21E 0814 FNL 0878 FWL BHL Sec 25 T09S R21E 0460 FNL 0726 FWL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

#### NBU 921-25F Pad

43-047-51243 NBU 921-25F1BS Sec 25 T09S R21E 2580 FNL 1780 FWL BHL Sec 25 T09S R21E 1366 FNL 2296 FWL

43-047-51244 NBU 921-25F1CS Sec 25 T09S R21E 2571 FNL 1784 FWL BHL Sec 25 T09S R21E 1754 FNL 2259 FWL

BHL Sec 25 1095 R2IE 1/54 FNL 2259 FWL

43-047-51245 NBU 921-25F3AS Sec 25 T09S R21E 2589 FNL 1776 FWL BHL Sec 25 T09S R21E 2034 FNL 1905 FWL

43-047-51246 NBU 921-25F3CS Sec 25 T09S R21E 2598 FNL 1772 FWL

BHL Sec 25 T09S R21E 2461 FNL 1628 FWL

43-047-51247 NBU 921-25L1BS Sec 25 T09S R21E 2607 FNL 1768 FWL

BHL Sec 25 T09S R21E 2597 FSL 0969 FWL

#### NBU 921-25H Pad

43-047-51248 NBU 921-25A3DS Sec 25 T09S R21E 1498 FNL 0736 FEL

BHL Sec 25 T09S R21E 1110 FNL 0776 FEL

43-047-51249 NBU 921-25G1CS Sec 25 T09S R21E 1489 FNL 0754 FEL

BHL Sec 25 T09S R21E 1895 FNL 1893 FEL

43-047-51250 NBU 921-25G2AS Sec 25 T09S R21E 1484 FNL 0763 FEL

BHL Sec 25 T09S R21E 1439 FNL 2042 FEL

43-047-51252 NBU 921-25H2AS Sec 25 T09S R21E 1493 FNL 0745 FEL

BHL Sec 25 T09S R21E 1538 FNL 0857 FEL

43-047-51253 NBU 921-25H2DS Sec 25 T09S R21E 1502 FNL 0727 FEL

BHL Sec 25 T09S R21E 1958 FNL 0913 FEL

# NBU 921-25J Pad

43-047-51254 NBU 921-25J4AS Sec 25 T09S R21E 1878 FSL 1725 FEL

BHL Sec 25 T09S R21E 1795 FSL 1360 FEL

43-047-51255 NBU 921-25J4CS Sec 25 T09S R21E 1886 FSL 1743 FEL

BHL Sec 25 T09S R21E 1604 FSL 1920 FEL

43-047-51256 NBU 921-25J1DS Sec 25 T09S R21E 1882 FSL 1734 FEL

BHL Sec 25 T09S R21E 2218 FSL 1381 FEL

# NBU 921-25K Pad

43-047-51257 NBU 921-25K4BS Sec 25 T09S R21E 1838 FSL 1400 FWL

BHL Sec 25 T09S R21E 1848 FSL 2161 FWL

43-047-51258 NBU 921-25L2AS Sec 25 T09S R21E 1848 FSL 1402 FWL

BHL Sec 25 T09S R21E 2423 FSL 0465 FWL

API #	WE:	LL NAME			LOCA'	TION		
(Proposed PZ	WASA	ATCH-MESA V	ERDE	)				
43-047-51259	NBU				 R21E R21E		 	
43-047-51260	NBU				 R21E R21E		 	
NBU 921-25N 1	Pad							
43-047-51261	NBU				 R21E R21E	_	 	
43-047-51262	NBU				R21E R21E			
43-047-51263	NBU				R21E R21E			
43-047-51264	NBU				R21E R21E			
NBU 921-25C 1	Pad							
43-047-51265	NBU				 R21E R21E			
43-047-51266	NBU				R21E R21E			
43-047-51267	NBU				R21E R21E			
43-047-51268	NBU				R21E R21E			
NBU 921-251 I	Pad							
43-047-51269	NBU				R21E R21E			
43-047-51270	NBU				 R21E R21E		 	
43-047-51271	NBU				R21E R21E			
43-047-51272	NBU				R21E R21E			
43-047-51273	NBU				R21E R21E			

Page 4

API # WELL NAME

LOCATION

(Proposed PZ WASATCH-MESA VERDE)

# NBU 921-25J2 Pad

43-047-51274 NBU 921-25G3AS Sec 25 T09S R21E 2611 FSL 2578 FEL BHL Sec 25 T09S R21E 2265 FNL 2136 FEL 43-047-51275 NBU 921-25G3CS Sec 25 T09S R21E 2606 FSL 2587 FEL BHL Sec 25 T09S R21E 2530 FNL 2518 FEL 43-047-51276 NBU 921-25J2CS Sec 25 T09S R21E 2601 FSL 2596 FEL BHL Sec 25 T09S R21E 2310 FSL 2410 FEL

43-047-51277 NBU 921-25K1CS Sec 25 T09S R21E 2596 FSL 2605 FEL BHL Sec 25 T09S R21E 2186 FSL 2231 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals
Small=Michael Coulthard(ptlm.gov, c=US
Date: -2010 RG J 12-8546, Got

bcc: File - Natural Buttes Unit
 Division of Oil Gas and Mining
 Central Files
 Agr. Sec. Chron
 Fluid Chron

MCoulthard:mc:8-17-10

From: Jim Davis

To: Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana

CC: Bartlett, Floyd; Laura.Gianakos@anadarko.com; Piernot, Danielle; Upch...

**Date:** 9/2/2010 9:13 AM

**Subject:** SITLA approval of Kerr McGee wells **Attachments:** KMG approvals and paleo 9.1.2010.xlsx

The following wells have been approved by SITLA including arch clearance. Paleo clearance is also granted with stipulations as noted.

Full Paleo monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist.

```
NBU 922-29F4DS [API #4304751207] Full Monitoring IPC 10-08
 NBU 922-29G4CS [API #4304751208] Full Monitoring
                                                  IPC 10-08
 NBU 922-29J4BS [API #4304751209] Full Monitoring
                                                  IPC 10-08
 NBU 922-29K1DS [API #4304751210] Full Monitoring
                                                   IPC 10-08
 NBU 922-29G1AS [API #4304751194] Full Monitoring
                                                   IPC 10-06
 NBU 922-29G1DS [API #4304751195] Full Monitoring
                                                   IPC 10-06
 NBU 922-29G2BS [API #4304751196] Full Monitoring
                                                  IPC 10-06
 NBU 922-29G3BS [API #4304751197] Full Monitoring
                                                  IPC 10-06
NBU 921-25A3DS [API 4304751248]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G1CS [API 4304751249]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25G2AS [API 4304751250]
                                                  IPC 10-21
                                    Full Monitoring
NBU 921-25H2AS [API 4304751252]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25H2DS [API 4304751253]
                                    Full Monitoring
                                                  IPC 10-21
NBU 921-25G3AS [API 4304751274]
                                    Full Monitoring
                                                  IPC 10-23
NBU 921-25G3CS [API 4304751275]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25J2CS [API 4304751276]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25K1CS [API 4304751277]
                                                  IPC 10-23
                                    Full Monitoring
NBU 921-25A2AS [API 4304751237]
                                    Full Monitoring IPC 10-21
NBU 921-25B1CS [API 4304751238]
                                    Full Monitoring IPC 10-21
```

Spot Paleo Monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist at the beginning of construction and thereafter spot-monitored as paleontological conditions merit.

```
Spot Monitoring IPC 10-20
NBU 921-25C1AS [API 4304751239]
NBU 921-25D1BS [API 4304751240]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25D1CS [API 4304751251]
NBU 921-25E1CS [API 4304751241]
                                    Spot Monitoring IPC 10-20
NBU 921-25E3AS [API 4304751242]
                                    Spot Monitoring IPC 10-20
NBU 921-25F1BS [API 4304751243]
                                    Spot Monitoring IPC 10-21
NBU 921-25F1CS [API 4304751244]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3AS [API 4304751245]
                                    Spot Monitoring IPC 10-21
NBU 921-25F3CS [API 4304751246]
                                    Spot Monitoring IPC 10-21
NBU 921-25L1BS [API 4304751247]
                                    Spot Monitoring IPC 10-21
NBU 921-25J1DS [API 4304751256]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4AS [API 4304751254]
                                    Spot Monitoring IPC 10-23
NBU 921-25J4CS [API 4304751255]
                                    Spot Monitoring IPC 10-23
NBU 921-25K4BS [API 4304751257]
                                    Spot Monitoring IPC 10-22
NBU 921-25L2AS [API 4304751258]
                                    Spot Monitoring IPC 10-22
NBU 921-25L4AS [API 4304751259]
                                    Spot Monitoring IPC 10-22
                                    Spot Monitoring IPC 10-22
NBU 921-25N2BS [API 4304751260]
NBU 921-25K4CS [API 4304751261]
                                    Spot Monitoring IPC 10-23
NBU 921-25N2DS [API 4304751262]
                                    Spot Monitoring IPC 10-23
NBU 921-25N3AS [API 4304751263]
                                    Spot Monitoring IPC 10-23
```

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NBU 921-25O4BS [API 4304751264]
                                    Spot Monitoring IPC 10-23
NBU 921-25B3AS [API 4304751265]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25B3DS [API 4304751266]
NBU 921-25C2DS [API 4304751267]
                                    Spot Monitoring IPC 10-20
                                    Spot Monitoring IPC 10-20
NBU 921-25C3AS [API 4304751268]
NBU 921-25IT [API 4304751273]
                                    Spot Monitoring IPC 10-23
NBU 921-25H3DS [API 4304751269]
                                    Spot Monitoring IPC 10-23
NBU 921-25I2AS [API 4304751270]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4AS [API 4304751271]
                                    Spot Monitoring IPC 10-23
NBU 921-25I4DS [API 4304751272]
                                    Spot Monitoring IPC 10-23
NBU 922-29A1BS [API #4304751183]
                                    Spot Monitoring IPC 10-06
 NBU 922-29A1CS [API #4304751184] Spot Monitoring IPC 10-06
 NBU 922-29A4CS [API #4304751185] Spot Monitoring IPC 10-06
 NBU 922-29H1BS [API #4304751186] Spot Monitoring IPC 10-06
 NBU 922-29B2CS [API #4304751187] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29B4AS [API #4304751188] Spot Monitoring IPC 10-06
 NBU 922-29C2AS [API #4304751189] Spot Monitoring IPC 10-06
                                                             (SITLA surf/ Fed Min)
 NBU 922-29C4AS [API #4304751190] Spot Monitoring IPC 10-06
 NBU 922-29B1AS [API #4304751191] Spot Monitoring IPC 10-06
 NBU 922-29B1DS [API #4304751192] Spot Monitoring IPC 10-06
 NBU 922-29B2BS [API #4304751193] Spot Monitoring IPC 10-06
 NBU 922-29D4DS [API #4304751198] Spot Monitoring IPC 10-05
 NBU 922-29E3BS [API #4304751199] Spot Monitoring IPC 10-05
 NBU 922-29F3AS [API #4304751200] Spot Monitoring IPC 10-05
 NBU 922-29F3BS [API #4304751201] Spot Monitoring IPC 10-05
 NBU 922-29G4AS [API #4304751202] Spot Monitoring IPC 10-06
 NBU 922-29H1CS [API #4304751203] Spot Monitoring IPC 10-06
 NBU 922-29H4CS [API #4304751204] Spot Monitoring IPC 10-06
 NBU 922-2911BS [API #4304751205] Spot Monitoring IPC 10-06
 NBU 922-29I1CS [API #4304751206] Spot Monitoring IPC 10-06
 NBU 922-29K2CS [API #4304751211] Spot Monitoring IPC 10-07
 NBU 922-29K4AS [API #4304751212] Spot Monitoring IPC 10-07
 NBU 922-29L1AS [API #4304751213] Spot Monitoring IPC 10-07
 NBU 922-29L2BS [API #4304751214] Spot Monitoring IPC 10-07
 NBU 922-29L2CS [API #4304751215] Spot Monitoring IPC 10-07
 NBU 922-29L3CS [API #4304751216] Spot Monitoring IPC 10-07
 NBU 922-29M2AS [API #4304751217] Spot Monitoring IPC 10-07
 NBU 922-29N2BS [API #4304751218] Spot Monitoring IPC 10-07
 NBU 922-29N3BS [API #4304751219] Spot Monitoring IPC 10-07
 NBU 922-30I4BS [API #4304751220] Spot Monitoring IPC 10-07 (SITLA surf/ Fed Min)
 NBU 922-30I4CS [API #4304751221] Spot Monitoring IPC 10-07 (SITLA surf/Fed Min)
 NBU 922-29J4CS [API #4304751222] Spot Monitoring IPC 10-08
 NBU 922-29N1BS [API #4304751223] Spot Monitoring IPC 10-08
 NBU 922-29O1CS [API #4304751224] Spot Monitoring IPC 10-08
```

That's quite a list, so I'm attaching a quick-and-dirty spreadsheet of the same data. This may be helpful to some of you.

Thanks.

-Jim

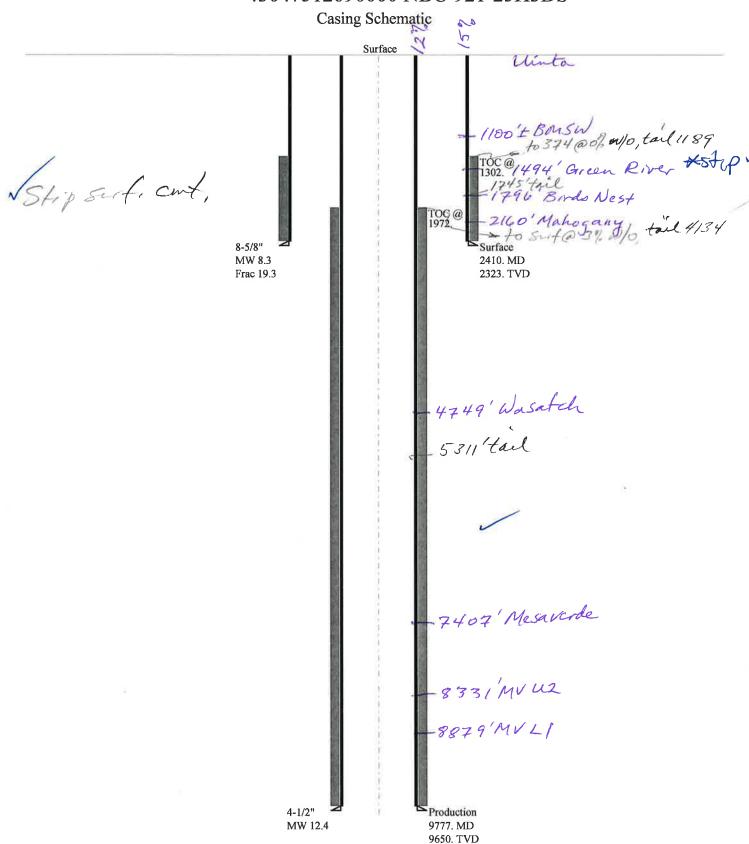
'APIWellNo:43047512690000'

Jim Davis Utah Trust Lands Administration jimdavis1@utah.gov Phone: (801) 538-5156

# BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-25H3DS 43047512690000

Well Name		KERR-MCGEE O	IL & GAS	ONSHO	RE, I	L.P. NBU 921	-25H3	3DS 430475126
String		Surf	Prod				i I	
Casing Size(")		8.625	4.500		Ī		i İ	
Setting Depth (TVD)		2410 9650				Ī	<del></del>	
Previous Shoe Setting Dept	pe Setting Depth (TVD)			=	Ī		Ī	<del></del>
Max Mud Weight (ppg)		8.3	12.4	=	Ħ		ī	<del></del>
BOPE Proposed (psi)		500	5000		Ī		Ī	<del></del>
Casing Internal Yield (psi)		3390	7780		Ī		Ī	<del></del>
Operators Max Anticipated	d Pressure (psi)	6080	12.1	=	Ħ			<del></del>
					_			
Calculations	Sui	rf String					.625	-
Max BHP (psi)		.052*Setti	ng Dep	th*M	W=	1044	_	DODE 11 4 E. D. W. A. 10 41 G. I. A. D. 410
MACD (C) ()	M-	DIID (0.128	C -44'	D	1. \_		=	BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		x BHP-(0.12*			_	-	=	NO air drill
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	Setting	g Depi	h)=	514	_	NO OK
n Aan Ci	M DUD 22*(C #; F	2 d D :	CI	D	1.\	-	_	*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	` •	Deptn - Previo	us Snoe	е Бер	.n)=	1,	=	NO Reasonable depth in area
Required Casing/BOPE Te					_	2373	_	psi
*Max Pressure Allowed @	Previous Casing Shoe=					40		psi *Assumes 1psi/ft frac gradient
Calculations	Pro	d String				4.	.500	"
Max BHP (psi)		.052*Setti	ng Dep	th*M	W=	6222	<u> </u>	
4 /			-			1		BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	Setting	g Dept	h)=	5064	=	NO
MASP (Gas/Mud) (psi)	Ma	x BHP-(0.22*	Setting	Dept	h)=		=	YES OK
, , , ,					_	1	_	*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting I	Depth - Previo	us Shoe	e Dep	h)=	4629	=	NO Reasonable
Required Casing/BOPE Te	est Pressure=					5000	=	psi
*Max Pressure Allowed @	Previous Casing Shoe=					2410	=	psi *Assumes 1psi/ft frac gradient
						1.		
Calculations	5	String						"
Max BHP (psi)		.052*Setti	ng Dep	th*M	W=			
						-	_	BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		ax BHP-(0.12*			_			NO .
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	Setting	g Dept	h)=	-		NO .
			~-				_	*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	` -	Depth - Previo	us Shoe	Dep	h)=	-	_	NO
Required Casing/BOPE Te								psi
*Max Pressure Allowed @	Previous Casing Shoe=							psi *Assumes 1psi/ft frac gradient
Calculations		String			_			l"
Max BHP (psi)		.052*Setti	ng Dep	th*M	W=		=	
4 /						-	=	BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Ma	ax BHP-(0.12*	Setting	Dept	h)=		=	NO
MASP (Gas/Mud) (psi)	Ma	ax BHP-(0.22*	Setting	Dept	h)=		=	NO I
						1		*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(Setting D	Depth - Previo	us Shoe	Dep	h)=			NO
Required Casing/BOPE Te	est Pressure=							psi
*Max Pressure Allowed @	Previous Casing Shoe=							psi *Assumes 1psi/ft frac gradient

# 43047512690000 NBU 921-25H3DS



Well name:

43047512690000 NBU 921-25H3DS

Minimum design factors:

1.125

1.00

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

8.330 ppg

String type:

Surface

Project ID:

Location:

Mud weight:

**UINTAH** COUNTY

43-047-51269

Design parameters:	
Collapse	

Design is based on evacuated pipe.

Collapse: Design factor **Environment:** 

H2S considered? No Surface temperature: 74 °F 107 °F Bottom hole temperature:

Temperature gradient: 1.40 °F/100ft Minimum section length: 100 ft

Burst:

Design factor

Cement top:

1,302 ft

**Burst** 

Max anticipated surface

pressure: 2,121 psi Internal gradient: 0.120 psi/ft Calculated BHP 2,400 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J) 8 Round LTC: 1.70 (J) 1.60 (J) Buttress: Premium: 1.50 (J) 1.50 (B) Body yield:

Tension is based on air weight. Neutral point: 2,106 ft Directional Info - Build & Drop

Kick-off point 300 ft Departure at shoe: 552 ft Maximum dogleg: 2 °/100ft 20° Inclination at shoe:

Re subsequent strings:

Next setting depth: 9,650 ft Next mud weight: 12.400 ppg Next setting BHP: 6,216 psi Fracture mud wt: 19.250 ppg 2,410 ft Fracture depth:

Injection pressure: 2,410 psi

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length (ft)	Size (in)	Weight (lbs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Cost (\$)
1	2410	8.625	28.00	I-55	LT&C	2323	2410	7.892	95436
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load (psi)	Strength (psi)	Design Factor	Load (psi)	Strength (psi)	Design Factor	Load (kips)	Strength (kips)	Design Factor
1	1005	1880	1.870	2400	3390	1.41	65	348	5.35 J

Prepared

Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: September 29,2010 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2323 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047512690000 NBU 921-25H3DS Well name:

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Production String type: Project ID: 43-047-51269

**UINTAH** COUNTY Location:

Design parameters: Minimum design factors: Environment: Collapse Collapse: H2S considered?

Surface temperature: Mud weight: 12.400 ppg Design factor 74 °F 1.125 Internal fluid density: 2.330 ppg Bottom hole temperature: 209 °F

Temperature gradient: 1.40 °F/100ft Minimum section length: 100 ft

Burst:

Design factor 1.00 Cement top: 1,972 ft **Burst** 

Max anticipated surface

pressure: 4,093 psi Internal gradient: 0.220 psi/ft Tension: Directional Info - Build & Drop Calculated BHP 6,216 psi 8 Round STC: 1.80 (J) Kick-off point 300 ft 1.80 (J) Departure at shoe: 837 ft 8 Round LTC:

No backup mud specified. Buttress: 1.60 (J) Maximum dogleg: 2 °/100ft 1.50 (J) Inclination at shoe: 0° Premium:

Body yield: 1.60 (B) Tension is based on air weight. Neutral point: 7,988 ft

Run Segment End True Vert Nominal Measured Drift Est. Length Seq Size Weight Grade **Finish** Depth Depth Diameter Cost (ft) (in) (lbs/ft) (ft) (ft) (in) (\$) 1 9777 4.5 11.60 I-80 LT&C 9650 9777 3.875 129056 Run Collapse Collapse Collapse **Burst** Burst **Burst Tension Tension Tension** Load Strength Design Load Seq Strength Design Load Strength Design (psi) (psi) **Factor** (psi) (psi) **Factor** (kips) (kips) **Factor** 1 5048 6360 1.260 6216 1.25 1.89 J

7780

Prepared Helen Sadik-Macdonald Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: September 29,2010 Salt Lake City, Utah

212

111.9

No

Remarks:

Collapse is based on a vertical depth of 9650 ft, a mud weight of 12.4 ppg. An internal gradient of .121 psi/ft was used for collapse from TD Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

# **ON-SITE PREDRILL EVALUATION**

# Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name NBU 921-25H3DS

API Number 43047512690000 APD No 2955 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 NESE Sec 25 Tw 9.0S Rng 21.0E 2074 FSL 690 FEL

GPS Coord (UTM) 628684 4429250 Surface Owner

# **Participants**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

# Regional/Local Setting & Topography

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.9 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25I pad will be created by enlarging the existing pad of the CIGE 98D gas well. Five gas wells, to be directionally drilled, will be added. They are the NBU 921-25H3DS, 921-25IT, 921-25I2AS, 921-25I4AS and 921-25I4DS. The existing pad will be extended in all directions except to the south. The site is on the west slope of a ridge which continues beyond the location into broken terrain. Small drainages near Corner 11 and within the pad area north of the old pad will be filled. A drainage immediately south of the location will be avoided. No diversions are needed. The White River is approximately 3 1/2 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA.

# Surface Use Plan

**Current Surface Use** 

Grazing Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 352 Length 415 Onsite UNTA

**Ancillary Facilities** N

# Waste Management Plan Adequate?

# **Environmental Parameters**

Affected Floodplains and/or Wetlands N

Flora / Fauna

10/5/2010 Page 1

Vegetation is a poor desert shrub type, which includes shadscale, Russian thistle, Indian ricegrass, curly mesquite, broom snakeweed and halogeton..

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

# **Soil Type and Characteristics**

Surface soils are shallow sandy loam.

**Erosion Issues** N

**Sedimentation Issues** N

Site Stability Issues N

**Drainage Diverson Required?** N

Berm Required? N

**Erosion Sedimentation Control Required?** N

Paleo Survey Run? Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

# **Reserve Pit**

Site-Specific Factors	Site R	anking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>		0	
Affected Populations			
<b>Presence Nearby Utility Conduits</b>	Not Present	0	
	Final Score	40	1 Sensitivity Level

# **Characteristics / Requirements**

The proposed reserve pit is 104' x 260' x 12' deep located in a cut on the northeast side of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

# **Other Observations / Comments**

Evaluator	Date / Time
Floyd Bartlett	8/26/2010

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10/5/2010

# **Application for Permit to Drill Statement of Basis**

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	<b>Surf Owner</b>	<b>CBM</b>
2955	43047512690000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS	ONSHORE, L.P.	<b>Surface Owner-APD</b>		
Well Name	NBU 921-25H3DS		Unit	NATURAL B	UTTES
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NESE 25 9S 21E S	2074 FSL 690 FEL	GPS Coord (UTM)	628687E 4429	251N

# **Geologic Statement of Basis**

Kerr McGee proposes to set 2,410' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,100'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 25. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill 9/28/2010 **APD Evaluator Date / Time** 

# **Surface Statement of Basis**

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.9 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

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Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location. SITLA will provide site reclamation standards and a seed mix.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

'APIWellNo:43047512690000'

10/5/2010

# **Application for Permit to Drill Statement of Basis**

Utah Division of Oil, Gas and Mining

Page 2

Floyd Bartlett 8/26/2010
Onsite Evaluator Date / Time

# **Conditions of Approval / Application for Permit to Drill**

**Category** Condition

Pits A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and

maintained in the reserve pit.

Surface The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 8/17/2010 **API NO. ASSIGNED:** 43047512690000

WELL NAME: NBU 921-25H3DS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

PROPOSED LOCATION: NESE 25 090S 210E **Permit Tech Review:** 

> **SURFACE: 2074 FSL 0690 FEL Engineering Review:**

> **BOTTOM:** 2395 FNL 0870 FEL Geology Review:

**COUNTY: UINTAH** 

**LATITUDE:** 40.00555 **LONGITUDE:** -109.49236 **UTM SURF EASTINGS: 628687.00** NORTHINGS: 4429251.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

PROPOSED PRODUCING FORMATION(S): WASATCH-MESA VERDE LEASE NUMBER: UO 1189 ST

**SURFACE OWNER: 3 - State COALBED METHANE: NO** 

#### **RECEIVED AND/OR REVIEWED: LOCATION AND SITING:**

✓ PLAT R649-2-3.

**Unit: NATURAL BUTTES** Bond: STATE/FEE - 22013542

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

Oil Shale 190-13 ✓ Drilling Unit

Board Cause No: Cause 173-14 Water Permit: Permit #43-8496

**Effective Date:** 12/2/1999 **RDCC Review:** 

Siting: Suspends General Siting **Fee Surface Agreement** 

R649-3-11. Directional Drill ✓ Intent to Commingle

**Commingling Approved** 

Comments: Presite Completed

3 - Commingling - ddoucet 5 - Statement of Basis - bhill Stipulations:

15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - hmacdonald

API Well No: 43047512690000



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

# **Permit To Drill**

\*\*\*\*\*\*

Well Name: NBU 921-25H3DS API Well Number: 43047512690000 Lease Number: UO 1189 ST

**Surface Owner:** STATE **Approval Date:** 10/5/2010

# **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

# **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

# **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

# **Commingle:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

# General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

# **Conditions of Approval:**

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

API Well No: 43047512690000

# **Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

# **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well contact Carol Daniels OR
- submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

# **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

# **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

**Approved By:** 

For John Rogers Associate Director, Oil & Gas

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9
	DIVISION OF OIL, GAS, AND MINING	3	<b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 1189 ST
	RY NOTICES AND REPORTS ON	_	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen exist ıgged wells, or to drill horizontal laterals. Use Al		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25H3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047512690000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE NU treet, Suite 600, Denver, CO, 80217 3779	JMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2074 FSL 0690 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI	(P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE ☐ A	ALTER CASING	☐ CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS ☐ C	CHANGE TUBING	☐ CHANGE WELL NAME
11/1/2010	☐ CHANGE WELL STATUS ☐ 0	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT	☐ DEEPEN ☐ F	FRACTURE TREAT	☐ NEW CONSTRUCTION
Date of Work Completion:	☐ OPERATOR CHANGE ☐ F	PLUG AND ABANDON	☐ PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION S	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
·	☐ TUBING REPAIR ☐ \	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	☐ WATER SHUTOFF ☐ S	SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	☐ WILDCAT WELL DETERMINATION ✓ 0	OTHER	OTHER: ACTS/ Pit refurb
12 DESCRIPE PROPOSED OF CO		-	<u>'</u>
Kerr-McGee Oil & Ga this multi-well pad fo the requirements in t pad, Kerr-McGee is a be utilized for other of temporary frac tanks these tanks before t the frac tanks is to c with the other compl keep this pit oper	INPLETED OPERATIONS. Clearly show all pertinents of the Sonshore, LP is requesting to restrict completion operations. The refurthe COA of the APD. Upon completion requesting to utilize this pit as completion operations in the area. It placed on the location. The truck the water is placed into the refurbiollect any hydro-carbons that make the operations before releasing in for 1 year. During this time the eled in this pit and utilized for other	furb the existing pit on rb pit will be relined pertion of the wells on this an ACTS staging pit to There will be 2-500 bbs will unload water into the pit. We plan to surrounding well location	Approved by the Utah Division of Oil, Gas and Mining oil November 02, 2010  The Completion fluids will be
NAME (PLEASE PRINT) Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 10/25/2010	



# The Utah Division of Oil, Gas, and Mining

- State of UtahDepartment of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# **Sundry Conditions of Approval Well Number 43047512690000**

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

> Approved by the **Utah Division of** Oil, Gas and Mining

	STATE OF UTAH	ore.	FORM 9
	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND M		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25H3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047512690000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PH treet, Suite 600, Denver, CO, 80217 377	<b>ONE NUMBER:</b> 9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2074 FSL 0690 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NESE Section: 25	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian:	S	STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT  Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
11/17/2010	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT	│	☐ VENT OR FLARE	☐ WATER DISPOSAL
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU PETE MARTIN RAN 14" 36.7# SCHI SPUD WELL L	DIMPLETED OPERATIONS. Clearly show all point in the point of the point	CONDUCTOR HOLE TO 40'. CMT W/ 28 SX READY MIX 2010 AT 09:30 HRS.  Oil  FOR	
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 11/19/2010	

# STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES** DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM							
KERR McGEE OIL &	GAS ONSHORE LP	Operator Account Number:	N 2995				
P.O. Box 173779		— Operator Account Number.					
city DENVER		<del></del>	•				
state CO	<sub>zip</sub> 80217	Phone Number:	(720) 929-6100				

Operator:

Address:

API Number	Weil I	Weil Name			Well Name QQ	Sec	Twp	Rng	County
4304751269	51269 NBU 921-25H3DS		NESE	25	98	21E	UINTAH		
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignme Effective Date				
B	99999	3900	1	1/17/20	10	11/	29/10		
Comments: MIRU SPUD	PETE MARTIN BUCKE WELL LOCATION ON	T RIG. WSM 11/17/2010 AT 09:3		RIU	,= S.E	= 11 =			

Well 2

NBU 921-25I3AS		NESE	25	00	045	
	The second second second	1 1	20	98	21E	UINTAH
	ew Entity Number	Spud Date			ty Assignment fective Date	
9999	3900	1	1/17/20	10	11	129/10
	9999 Z	9999 3900 ARTIN BUCKET RIG. WSM	mber Number	ImberNumber9999 $390$ 11/17/20ARTIN BUCKET RIG. $WSMVD$	Imber         Number           9999         39の           ARTIN BUCKET RIG.         いるアルト	ImberNumberEf9999 $390$ 11/17/2010//ARTIN BUCKET RIG. $WSMVD$

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751270	NBU 921-25i	J 921-2512AS		25	98	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	S	Spud Date		Entity Assignment Effective Date	
B	99999	2900	1	1/17/20	10	11	129/10
	PETE MARTIN BUCKE WELL LOCATION ON	TRIG. WS7		RU	= N/	ESE	

### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
   E Other (Explain in 'comments' section)

NOV 2 2 2010

ANDY LYTLE			
Name (Please Print)			
1751			
Signature			
REGULATORY ANALYST	11/22/2010		
Title	Date		

	5.LEASE DESIGNATION AND SERIAL NUMBER:							
	UO 1189 ST  6. IF INDIAN, ALLOTTEE OR TRIBE NAME:							
	WELLS	o. If INDIAN, ALEOTTEE OR TRIBE NAME.						
Do not use this form for propo bottom-hole depth, reenter plu DRILL form for such proposals	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES							
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 921-25H3DS							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	9. API NUMBER: 43047512690000							
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 2074 FSL 0690 FEL	COUNTY: UINTAH							
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NESE Section: 25	STATE: UTAH							
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA								
TYPE OF SUBMISSION	TYPE OF ACTION							
	ACIDIZE	ALTER CASING	☐ CASING REPAIR					
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME					
	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE					
SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN ☐	FRACTURE TREAT	☐ NEW CONSTRUCTION					
	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK					
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION					
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON					
	☐ TUBING REPAIR ☐	VENT OR FLARE	WATER DISPOSAL					
✓ DRILLING REPORT Report Date: 11/21/2010	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION					
11/21/2010	☐ WILDCAT WELL DETERMINATION ☐	OTHER	OTHER:					
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU PROPETRO AIR RIG ON NOVEMBER 19, 2010. DRILLED 11" SURFACE HOLE TO 2740'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 155 BBLS FRESACcepted by the WATER. PUMP 20 BBLS GEL WATER. PUMP 350 SX CLASS G PREM LITE @ 15-14 An Division of PPG, 1.15 YD. NO CIRC. DISPLACED W/ 165 BBLS WATER. NO RETURNSOIL, Gas and Mining BUMP PLUG & HOLD 600 PSI FOR 5 MIN. FLOAT HELD. TOP OUT W/ 100 RECORD (ONLY CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. WAIT 2 HRS AND PUMPED 100 RECORD (ONLY CLASS G PREM LITE @ 15.8 PPG, 1.15 YD. WAIT 2 HRS & PUMPED 125 SX SAME CEMENT DOWN BACKSIDE, WAITED 2 HRS & PUMPED 225 SX SAME CEMENT DOWN BACKSIDE; WAITED 2 HRS & PUMPED 150 SX SAME CEMENT DOWN BACKSIDE. GOT CEMENT TO SURFACE. WORT.								
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst						
SIGNATURE	/20 323-0100	DATE						
N/A		11/23/2010						

# BLM - Vernal Field Office - Notification Form

Operator <u>KERR MCGEE</u> R	Rig Name/# <u>H&amp;P 311</u>
	Phone Number <u>435- 790-1884</u>
Well Name/Number NBU 921	
• • • • • • • • • • • • • • • • • • • •	Township <u>9S</u> Range _21E
Lease Serial Number <u>UO 118</u>	·
API Number43-047-51269	
7.1 1 (diliber 15 0 17 51205	<u></u>
Spud Notice – Spud is the initi	al spudding of the well, not drilling
out below a casing string.	, <u>,</u>
3 , 3	
Date/Time	AM  PM
<u>Casing</u> – Please report time ca	sing run starts, not cementing
times.	
Surface Casing	RECEIVED
Intermediate Casing	DEC 2 7 2010
Production Casing	
Liner	DIV. OF OIL, GAS & MINING
Other	
Date/Time <u>12/26/2010</u>	<u>22:30</u> AM PM 🔀
BOPE	
Initial BOPE test at surface	ce casing point
BOPE test at intermediate	e casing point
30 day BOPE test	
Other	
Date/Time	_ AM 🗌 PM 🗍
Remarks	

	STATE OF UTAH		FORM 9							
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN	5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST								
	SUNDRY NOTICES AND REPORTS ON WELLS o not use this form for proposals to drill new wells, significantly deepen existing wells below current obtom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO									
	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES									
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25H3DS							
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047512690000							
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHO treet, Suite 600, Denver, CO, 80217 3779	<b>NE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES							
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2074 FSL 0690 FEL			COUNTY: UINTAH							
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NESE Section: 25	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S	5	STATE: UTAH							
CHE	CK APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA							
TYPE OF SUBMISSION		TYPE OF ACTION								
	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR							
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	CHANGE WELL NAME							
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE							
SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION							
	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK							
SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION							
	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON							
✓ DRILLING REPORT	☐ TUBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL							
Report Date: 12/27/2010	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION							
, ,	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:							
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. FINISHED DRILLING FROM 2740' TO 9781' ON DECEMBER 25, 2010. RAN 4  1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT Waccepted by the 620 SX CLASS G ECONOCEM @ 12.6 PPG, 1.93 YD. TAILED CEMENT W/ 118 Tah Division of SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YD. SHUT DOWN & WASOII, Gas and Mining LINES, DROP 4.5" TOP PLUG, PUMP 152 BBLS WATER, INITIAL PSI OF 108 RECORD ONLY  @ 2250 PSI, PRESSURE UP CSG TO 3100 PSI & HOLD FOR 5 MIN. RELEASE PRESSURE & FLOAT HELD. EST TOC TAIL @ 4500', LEAD @ 1000'. RD CEMENTERS AND CLEANED PITS. RELEASED H&P RIG #311 ON DECEMBER  27, 2010 @ 14:00 HRS.										
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst								
SIGNATURE N/A		<b>DATE</b> 12/28/2010								

Sundry Number: 13943 API Well Number: 43047512690000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen e igged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-25H3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047512690000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	<b>E NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2074 FSL 0690 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NESE Section: 25	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
THE SUBJECT V 03/31/2011 AT 6:0	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE ✓ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  OMPLETED OPERATIONS. Clearly show all pertive to the completion of the co	ON PRODUCTION ON WELL HISTORY WILL BE TION REPORT.	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL APD EXTENSION OTHER: Folumes, etc.  ACCEPTED by the Jtah Division of I, Gas and Mining R RECORD ONLY
NAME (PLEASE PRINT) Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	TITLE Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 4/1/2011	

				STA TMENT ON OF	OF NA		L RESC						(hi	ghlight	D REPO	s)	FO	ORM 8
			IVIOI		OIL,	GAS	ANDI	VIIIVIIV							189 ST		SERIAL NUMI	BEK:
WELI	COM	PLET	ION	OR R	ECC	MPL	ETIC	ON RI	EPOR	TAN	LOG		6, 11	FINDIAN	, ALLOTTI	E OR TE	RIBE NAME	
1a. TYPE OF WELL:		OIL		G W	AS Z	7	DRY		отн	R					A AGREE		ME	
b. TYPE OF WORK NEW WELL	: HORIZ. LATS.	DE EN	EP	R	E- NTRY [	]	DIFF. RESVR.		отні	:R					ME and NI 921-25		S	
2. NAME OF OPERA KERR MC		. & GA	S ON	SHOR	E, L.F	·.								PI NUME 4304	BER: 751269	<del></del>		
3. ADDRESS OF OP P.O.BOX 17		Ci	TY DE	NVER		STATE	СО	ZIP <b>80</b> 2	217		NUMBER: 20) 929-6	3100			D POOL, O JRAL I			
4. LOCATION OF W AT SURFACE:		•	L 690	FEL S	S25, T	9S, R	21E			revi y He	lwec M	1		QTR/QT MERIDIA ESE	R, SECTIONS:	9S	NSHIP, RANG	
AT TOP PRODUC	CING INTERV	REPOR		.ow: S	ENE 2	2388 F	FNL 87	74 FEL										
AT TOTAL DEPT		2401	FNL 8				•	E					1	COUNTA JINTA			13. STATE	UTAH
14. DATE SPUDDED 11/17/2010		DATE T. 12/25/	2010		3/3	E COMPL 1/2011		,	ABANDONE	D _	READY TO I	PRODUC	E 🗸		980 G		B, RT, GL):	
18. TOTAL DEPTH:	MD 9,7		1	9. PLUG I	BACK T.D		9,737 9,608		20. IF N	ULTIPLE C	OMPLETIONS	s, HOW	MANY? *		PTH BRIDE LUG SET:			
22. TYPE ELECTRIC			CAL LOG	S RUN (S	ubmit cop					23.								***************************************
ACBL-CHI T	RIPLE C	OMBO	D-RMT	WAS WELL CORED?  WAS DST RUN?  DIRECTIONAL SURVEY?  NO YES (Submit analysis)  YES (Submit report)  YES (Submit copy)														
24. CASING AND LI	NER RECORD	(Report a	il strings	set in we	<b>II</b> )			,			<del>,</del>			<del></del>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		***************************************
HOLE SIZE	SIZE/GRA	DE	WEIGHT	(#/ft.)	TOP (	MD)	вотто	M (MD)		EMENTER PTH	CEMENT T NO. OF SA		SLUI VOLUM		CEMEN	NT TOP *	* AMOUN	PULLED
20"	14" {	STL	36.7	7#			4	0				28						
11"	<del></del>	J-55	287		****			728				1,050				0		
7 7/8"		1-80	11.6				·	736				1,805			5	780		
7 7/8"	4 1/2" P	110	11.6	#	9,7	36	9,7	'81		***								
								· · · · · · · · · · · · · · · · · · ·								15/1°		
25. TUBING RECOR	RD CD				*****		l						<del></del>	<del></del>	<u>.L.,</u> ,			·
SIZE	DEPTH S	ET (MD)	PACK	ER SET (M	ID)	SIZE		DEPTH	SET (MD)	PACKE	R SET (MD)		SIZE		DEPTH SE	T (MD)	PACKER S	SET (MD)
2 3/8"	9,0	77													***************************************			
26. PRODUCING IN		· · · · · · · · · · · · · · · · · · ·									RATION REC							
FORMATION		TOP (		вотто		TOP	(TVD)	BOTTO			L (Top/Bot - N		SIZE	NO. HO			RATION STA	TUS
(A) WASATCI		7,2		7,4			<del></del>			7,216		488	0.36	24			Squeezed	<u> </u>
(B) MESAVE	RDE	7,5	0/4	9,4	87			<u> </u>		7,574	9,4	487	0.36	179			Squeezed	<u> </u>
(C)															Ope		Squeezed	
(D)	or The a Thirt	L						<u> </u>							Ope		Squeezed	
28. ACID, FRACTUR	NTERVAL	NI, CEME	NI SQUE	EZE, E IU	•				4146	LIAIT AND T	VDE OF 1447	TO LAS			_Rt	<u>CE</u>	IVED	· · · · · · · · · · · · · · · · · · ·
7216 - 9487	IN) ERVAL		PUM	IP 10,	118 B	BLS S	SLICK	H2O 8			SAND	EKIAL		····	M	AY 1	9 2011	<del></del>
																	AS & MII	UNG_
29. ENCLOSED ATT	ACHMENTS:		,,,,,,,,,,,,,									<del></del>					LL STATUS:	
<del></del>	RICAL/MECHA Y NOTICE FO			CEMENT \	ÆRIFICA	TION		GEOLOGI	C REPORT		DST REPORT	Z	DIREC	TIONAL	SURVEY		PROE	)

31. INITIAL PRO	DDUCTION			INT	ERVAL A (As sho	wn in item #26)				
DATE FIRST PR 3/31/2011		TEST DATE: 4/8/2011		HOURS TESTED	): 24	TEST PRODUCTION RATES: →	OIL BBL:	GAS – MCF: 2,801	WATER - BBL: 528	PROD. METHOD: FLOWING
20/64	TBG. PRESS. 1,854	csg. press. 2,569	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF: 2,801	WATER - BBL: 528	INTERVAL STATUS PROD
				INT	ERVAL B (As sho	wn in item #26)				
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	):	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS,	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL BBL:	GAS MCF:	WATER - BBL:	INTERVAL STATUS
		,		INT	ERVAL C (As show	wn in item #26)	<del>*************************************</del>			<del>*************************************</del>
DATE FIRST PR	RODUCED:	TEST DATE:		HOURS TESTED	<b>):</b>	TEST PRODUCTION RATES: →	OIL BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION	OIL - BBL:	GAS - MCF:	WATER BBL:	INTERVAL STATUS

				INTE	RVAL D (As show	vn in item #26)				
DATE FIRST PRO	DDUCED:	TEST DATE:		HOURS TESTED		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS		24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33.	SUMMARY	OF	<b>POROUS</b>	ZONES	(include A	quifers)	ì

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1,544 1,865 2,253 4,879 7,561	7,561 9,781	TD		

35. ADDITIONAL REMARKS (include plugging procedure)

Attached is the chronological well history and final survey. Completion chrono details individual frac stages.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLE

REGULATORY ANALYST

34. FORMATION (Log) MARKERS:

SIGNATURE

5/6/2011 DATE

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

<sup>\*</sup> ITEM 20: Show the number of completions if production is measured separately from two or more formations.

Well: NBU 921	-25H3D	S RED		Spud Co	onductor	11/17/2	010	Spud Date: 11	1/19/2010		
Project: UTAH	-UINTAH	1			U 921-2				Rig Name No: H&P 311/311, PROPETRO/		
Event: DRILLII	NG		**************************************	Start Da	te: 11/13	/2010	Τ		End Date: 12/27/2010		
Active Datum:	RKB @5	,005.00ft (	above Mea	n Sea	UWI: N	E/SE/0/9	/9/S/21/E/25/0/0/26/PM/S/2074/E/0/690/0/0				
Level)	Marketon Sale	<b></b> /*2733						4			
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
11/19/2010	6:00	- 20:30	14.50	MIRU	01	A	P	10	MOVE RIG ONTO LOCATION, WORK ON RIG AND PUMP, DRESS TOP OF CONDUCTOR. INSTALL DIVERTER HEAD AND BOWIE LINE. BUILD DITCH. MOVE RIG OVER HOLE AND RIG UP SET CATWALK AND PIPE RACKS. RIG UP AND PRIME PIT PUMP AND MUD PUMP.		
		- 21:00	0.50	PRPSPD	01	В	Р		P/U 1.50 DEG BENT HOUSING HUNTING MTR SN 8040 . 7/8 LOBE .16 RPM. M/U Q506 SN 7019738 2ND RUN, W/ 6-18'S. INSTALL RUBBER.		
	21:00	- 22:00	1.00	DRLSUR	02	Α	P		SPUD SURFACE 11-19-2010 @ 21:00 HRS, DRILL 11" SURFACE HOLE F/40'-200' (160' @ 106'/HR) PSI ON/ OFF 690/410, UP/ DOWN/ ROT 27/22/25. 500 GPM, 45 RPM ON TOP DRIVE, 15-18K WOB		
		- 23:50	1.83	DRLSUR	06	Α	P		TOOH, PU AND ORIENT DIR TOOLS, TIH TO 200'		
11/20/2010		- 0:30	0.50	DRLSUR	06	Α	Р		FINISH TIH T/ 200' WITH DIR BHA		
	0:30	- 20:30	20.00	DRLSUR	02	С	P		DRILL/ SLIDE 11" SURFACE HOLE F/200'-2030' (1830' 91'/HR) PSI ON/ OFF 1610/1390, UP/ DOWN/ ROT 69/60/62. 135 SPM 18-20K WOB, 45 RPM ON TOP DRIVE. LOST RETURNS @ 1570' DRLG W/ AIREATED H2O CIRCULATING RESERV PIT		
		- 23:30	3.00	MAINT	80	Α	X		WAIT ON MECHANIC TO COME F/ VERNAL, REPAIR OIL LEAK ON TOP DRIVE		
	23:30	- 0:00	0.50	DRLSUR	02	С	P		DRILL/ SLIDE 11" SURFACE HOLE F/2030'-2080' (50' 50'/HR) PSI ON/ OFF 1610/1390, UP/ DOWN/ ROT 69/60/62. 135 SPM 18-20K WOB, 45 RPM ON TOP DRIVE.  CIRCULATING RESERV PIT, DRLG W/ AIREATED H2O		
11/21/2010	0:00	- 10:00	10.00	DRLSUR	02	С	P		DRILL/ SLIDE 11" SURFACE HOLE F/-2080'-2740' (660' 66'/HR) PSI ON/ OFF 1610/1390, UP/ DOWN/ ROT 69/60/62. 135 SPM 18-20K WOB, 45 RPM ON TOP DRIVE.  CIRCULATING RESERV PIT, DRLG W/ AIREATED H2O		
		- 11:30	1.50	DRLSUR	05	Α	P		CIRC AND COND HOLE CLEAN		
		- 17:30	6.00	DRLSUR	06	Α	Р		TOOH, LDDS AND DIR BHA, BREAK DOWN BHA SO IT CAN BE CHECKED BY CSI.		
		- 18:30	1.00	CSG	12	Α	P		RU TO RUN CSG, MOVE PIPE RACKS AND CATWALK, MOVE CSG OVER TO WORK AREA		
		- 23:00	4.50	CSG	12	С	P		HELD SAFETY MEETING, RUN CSG. RAN 61JTS OF 8-5/8", 28#, J-55, 8 RND CSG W/ LTC THREADS. LANDED FLOAT SHOE @ 2703.11' KB. RAN BAFFLE PLATE IN TOP OF SHOE JT LANDED 2657.10' KB. FILL CSG @ 500', 1500', AND 2500'.		
-	23:00	- 23:30	0.50	RDMO	01	E	Р		RIG DOWN RIG, MOVE OFF WELL, RELEASE RIG 11-21-2010 @ 23:30		

## Operation Summary Report

Well: NBU 921	-25H3DS RED	<u> 2011 - L. 11.2 21.15.</u>	Spud C	onductor	: 11/17/2	2010	Spud Date:	11/19/2010
Project: UTAH	-UINTAH		Site: NE	BU 921-2	5I PAD			Rig Name No: H&P 311/311, PROPETRO/
Event: DRILLI	NG		Start Da	ate: 11/13	3/2010			End Date: 12/27/2010
Active Datum: Level)	RKB @5,005.00ft (	above Mean	Sea	UWI: N	IE/SE/0/	9/S/21/E	/25/0/0/26/PM	/S/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
11/22/2010	0:00 - 10:50	10.83	CSG	12	E	P		HOLD SAFETY MEETING. INSTALL CEMENT HEAD. PSI TEST TO 2000 PSI. PUMP 155 BBLS OF 8.3# H20 AHEAD. NO CIRC. PUMP 20 BBLS OF 8.4# GEL WATER AHEAD. NO CIRC. PUMP 350 SX (72 BBLS) OF 15.8# 1.15 YIELD TAIL(2% CALC, 1/4# /SK OF FLOCELE). NO CIRC. DROP PLUG ON FLY AND DISPLACE W/165 BBLS OF 8.3# H20. NO RETURNS, BUMP PLUG AND HOLD 600 PSI FOR 5 MIN. FLOAT HELD.  TOP OUT, PUMP 100 SX (21 BBLS) OF 15.8# 1.15 YIELD TAIL(4 % CALC, 1/4# /SK OF FLOCELE). WAITED 2 HRS PUMPED ANOTHER 100 SX (21 BBLS), WAITED ANOTHER 2 HRS PUMPED 125 SX DOWN BACKSIDE, WAITED 2 HRS PUMPED 150 SX DOWN BACKSIDE, WAITED 2 HRS PUMPED 150 SX DOWN BACKSIDE FINALLY GOT CMT TO SURFACE. RIG DOWN CEMENTERS AND RELEASE CEMENTERS 10:50 HRS.
12/11/2010 12/12/2010	21:00 - 0:00 0:00 - 6:00 6:00 - 18:00	3.00 6.00 12.00	RDMO RDMO RDMO	· 01 01 01	A E A	P P		CONDUCTOR CASING: Cond. Depth set: 40' Cement sx used: 28  SPUD DATE/TIME: 11-19-2010 @ 21:00  SURFACE HOLE: Surface From depth: 40' Surface To depth: 2,740 Total SURFACE hours: 31.5 Surface Casing size: 8.625" # of casing joints ran: 61 Casing set MD: 2,703.11' # sx of cement: 350 SKS, (72BBLS)TAIL, 700 SKS (144 BBLS)TOP OUT Cement blend (ppg:) 15.8# ON TAIL CMTS Cement yield (ft3/sk): # of bbls to surface:0 BBL Describe cement issues: NO CIRC DURING CMT JOB Describe hole issues: LOST TOTAL CIRC @ 1580' PREPARE TO MOVE RIG. CONTINUED TO RIG IN PREPARATION OF THE RIG MOVE. HELD SAFETY MEETING WITH TRUCKING COMPANY. HAD 3 BED TRUCKS, 2 HAUL TRUCKS, 2 FORKLIFTS AND 2 CRANES. HAULED THE FUEL TANK, 2 GENERATORS, 2 CONEX
	18:00 - 0:00	6.00	RDMO	01	Α	Р		BOXES, DERRICK STAND, BAR HOPPER, ALL MUD PRODUCTS, YELLOW DOG, 2 WATER TANKS, SHAKER/PROCESS TANK WITH SHAKERS, 1 MUD TANK, FLARE LINES, 5 PIPE TUBS, ALL LOOSE PIPE, MATS AND SKID RAILS. SET WATER TANKS, GAS BUSTER, PROCESS TANK/SHAKERS AND 1 MUD TANK ON THE NEW LOCATION, SET ALL ON PLASTIC. MAST DOWN AT 1430 HRS AND OFF THE FLOOR AT 1600 HRS. SPILT DERRICK AND LOADED ONE HALF ON A TRUCK. SHUT DOWN FOR DARKNESS. SHUT DOWN, WAITING ON DAYLIGHT.

5/2/2011

3:38:03PM

# **Operation Summary Report**

Well: NBU 921				Spud Co	onductor	: 11/17/2	010	Spud Date: 11/19/2010			
Project: UTAH	-UINTAH			Site: NB	U 921-2	5I PAD		Rig Name No: H&P 311/311, PROPETRO/			
Event: DRILLII	NG			Start Da	te: 11/13	/2010		End Date: 12/27/2010	End Date: 12/27/2010		
Active Datum: Level)	RKB @5	,005.00ft (a	above Mean	Sea	UWI: N	E/SE/0/9	)/S/21/E	/25/0/0/26/PM/S/2074/E/0/690/0/0			
Date	Sta	ime rt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)			
12/13/2010		- 6:00	6.00	RDMO	01	Α	Р	WAITING ON DAYLIGHT TO RESUME RIG MO			
	6:00	- 18:00	12.00	RDMO	01	A	P	DISASSEMBLED SUBSTRUCTURE. HAULED REMAINING PIECES TO NEW LOCATION. REMOVED CENTER STEEL AND PLACED IT OF PIPE RACKS, WELDERS COMMENCED WORLD ON ROTATING MOUSEHOLE AT 1100 HRS. SEACK YARD AND REASSEMBLED SUBS ON LOCATION. THE LAST PIECES WE SET WER THE DOGHOUSE SUB AND THE ODS FLOOR REMAINING TO SET IS THE DOGHOUSE, OD: PORCH, DRAWWORKS, DERRICK AND CENTESTEEL. DID NOT PUT DERRICK TOGETHER. EVERYTHING IS SET IN PLACE, WAITING ON CENTER STEEL TO RESUME RIG UP.	ON SET NEW RE SUE S		
		- 0:00	6.00	RDMO	01	Α	P	SHUT DOWN FOR DARKNESS, WAITING ON DAYLIGHT.			
12/14/2010		- 6:00	6.00	MIRU	01	Α	Р	WAITING ON DAYLIGHT TO CONTINUE WORK ON ROTATING MOUSEHOLE/RIGGING UP.	KING		
		- 18:00	12.00	MIRU	01	В	Р	MOVED CAMPS, TRANSFERED MUD AND HAULED UPRIGHT TANKS OVER TO NEW LOCATION. FENCED OLD LOCATION. CONTINUED WORKING ON ROTATING MOUSEHOLE AND RIGGING UP RIG. FILLED FIRED BOILER, FILLED RIG TANK. HAULED WATER TO RESERVE PIT. NO RIG MOVING TRUCKS OR CRANE ACTIVITY.	AND		
	18:00		6.00	MIRU	01	В	Р	WAITING ON DAYLIGHT TO CONTINUE WORK ON ROTATING MOUSEHOLE/RIGGING UP.	KING		
12/15/2010		- 6:00	6.00	MIRU	01	В	P	WAITING ON DAYLIGHT TO RESUME RIG UP OPERATIONS.			
		- 18:00	12.00	MIRU	01	В	Р	SET FLARE LINES, DID MISC WELDING ON THE RIG, RIGGED UP TRANSFER PUMP AND YELF DOG AND CLEANED RIG.	HE LOW		
	18:00		6.00	MIRU	01	В	P	WAITING ON DAYLIGHT TO RESUME RIG UP OPERATIONS.			
12/16/2010	0:00		6.00	MIRU	01	В	P	WAITING ON DAYLIGHT TO RESUME RIGGING OPERATIONS.	G UP		
		- 16:30	10.50	MIRU	01	В	P	HELD SAFETY MEETING WITH RIG MOVING COMPANY. HAULED CENTER STEEL AND DRAWWORKS FROM OLD LOCATION. INSTALLED CENTER STEEL AND FINISHED STACKING SUBS. PUT DERRICK TOGETHER AND HAD THE DERRICK ON THE FLOOR AT 1 HRS AND HAD IT RAISED AT1530 HRS. RELEASED ALL EQUIPMENT AT 1630 HRS.	: 1230		
	16:30	- 0:00	7.50	MIRU	01	В	P	RIGGING UP BY HAND. WELDERS WORKED IN NEW ROTATING MOUSEHOLE. HAD TO REBUTHE RIG FLOOR'S RACKING BOARDS. FILLIN	UILD		
12/17/2010		- 10:30	10.50	MIRU	01	В	P	RESERVE PIT.  CONTINUED TO RIG UP BY HAND. PINNED  TOPDRIVE, FINISHED RIGGING UP THE FLOC  AND UNSTRAPPED KELLY HOSE AND DRAG  CHAIN.	)R		
	10:30		1.00	PROD	09	Α	Ρ	CUT AND SLIP DRILLING LINE.			
	11:30	- 16:00	4.50	PROD	14	Α	Р	NU BOPE			

5/2/2011

3:38:03PM

# **Operation Summary Report**

Well: NBU 921	-25H3DS RED	- 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	Spud Co	nductor	: 11/17/2	010	Spud Date: 11/19/2010
Project: UTAH	-UINTAH		Site: NB	J 921-2	51 PAD		Rig Name No: H&P 311/311, PROPETRO/
Event: DRILLII	VG	***************************************	Start Dat	te: 11/13	3/2010		End Date: 12/27/2010
Active Datum: Level)	RKB @5,005.00ft (	above Mean	Sea	UWI: N	E/SE/0/9	/S/21/E	E/25/0/0/26/PM/S/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	16:00 - 19:30 19:30 - 21:00	1.50	PROD	15	A	P	TESTED BOPE. PRESSURE TEST PIPE RAMS, BLIND RAMS, IBOP, FLOOR VALVE, KILL LINE, & KILL LINE VALVES, BOP WING VALVES, HCR VALVE, CHOKE LINE INNER & OUTER CHOKE VALVES, & MANIFOLD 250 PSI LOW/5 MINUTES, 5K HIGH FOR 10 MINUTES, TEST ANNULAR 250 LOW/5 MINUTES, 2500 HIGH/10 MINUTES, TEST SUPER CHOKE. FUNCTION TEST CLOSING UNIT. CHECKED AND RECHARGED ALL THE KOOMEY UNIT BOTTLES TO 1050 PSI.  PRESSURE TESTED CASING TO 1500 PSI FOR 30 MINUTES, FILLED CHOKE LINE WITH METHANOL AND DISCUSSED HOW WE WERE GOING TO GET THE FLOWLINE HOOKED UP. THE NIPPLE COMING OFF THE ROTATING HEAD WAS WELDED ON CROOKED SO THE FLOWLINE WILL
	21:00 - 21:30	0.50	PROD	07	٨	-	NOT MAKE UP VERY EASILY.
	21:30 - 21:30	0.50 1.00	PROD	07 01	A A	P P	RIG SERVICE INSTALLED WEAR BUSHING, HAD A VERY HARD
						·	TIME GETTING IT TO RELEASE. RIGGED DOWN BOP TESTER.
	22:30 - 23:30	1.00	PROD	06	Α	Р	HELD SAFETY MEETING AND RIGGED UP PICK UP MACHINE.
	23:30 - 0:00	0.50	PROD	06	Α	P	PICKUP DRILLPIPE.
12/18/2010	0:00 - 12:30	12.50	PROD	06	Α	Р	CONTINUED TO PU DRILLPIPE. PICKED UP 186 JTS OR 5766'.
	12:30 - 14:30	2.00	PROD	06	Α	Р	MU HUGHES Q506F BIT (SERIAL #7019036, 6-14'S), HUNTING 1.5 DEGREE BENT, 7:8, 3.5 HR. 0.21 REV/GAL MUD MOTOR. MU DIRECTIONAL TOOLS, INSTALLLED E-FIELD TOOL AND SCRIBED SAME.
	14:30 - 15:00	0.50	PROD	07	Α	P	RIG SERVICE
	15:00 - 16:00	1.00	PROD	06	Α	Р	FOUND 2 CRACKS WEATHERFORD'S PICKUP POLE THAT SITS IN THE MOUSEHOLE. RIGGED DOWN THE PU MACHINE.
	16:00 - 19:30	3.50	PROD	06	Α	Р	PICKED UP HWDP BY HAND.
	19:30 - 21:00 21:00 - 23:00	1.50 2.00	PROD PROD	06 06	A A	P P	CHANGED OUT SAVER SUB, INSTALLED CORROSION RING AND ROTATING HEAD. TRIP IN THE HOLE WITH DP, TAGGED CMT AT
	23:00 - 0:00						2690', PRESSURE TESTED MUDLINES, STANDPIPE AND KELLY HOSE.
		1.00	PROD	02	F	Р	DRILLED CEMENT, BAFFLE PLATE, SHOE TRACK AND SHOE.
12/19/2010	0:00 - 1:30	1.50	PROD	02	F	P	CONTINUED TO DRILL CEMENT, BAFFLE PLATE, SHOE TRACK AND SHOE.
	1:30 - 3:00	1.50	PROD	80	В	Z	RIG REPAIR-DOWN TIME-TROUBLE SHOOT HMI AND PLC
	3:00 - 6:00	3.00	PROD	02	D	Р	DRILLED 2761'-3115', 354' IN 3 HRS, 118 FPH. MADE 3 20' SLIDES AT 10 MINUTES PER SLIDE.
	6:00 - 14:30	8.50	PROD	02	D	P	DRILLED 3115'-3971', 856' IN 8.5 HRS, 107 FPH. MADE 5 SLIDES, 85' IN 80 MINUTES TOTAL. WOB WAS 15-17K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 104 RPM WITH TOPDRIVE AT 55 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 250-350 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 1450/1200 PSI. ON/OFF BOTTOM TORQUE WAS 9/7K. PU/SO/ROT WAS 158/97/119. MW 8.3 PPG IN 8.3 OUT, 26 VIS AND 0 % LCM, SLIGHT LOSSES. CIRCULATING THE RESERVE PIT. STARTED DRILLING WITH A CONSISTENT 15-50' FLARE FROM 3215' TO 3971'.

## Operation Summary Report

Well: NBU 921	-25H3DS RED		Spud Co	onductor	: 11/17/2	010	Spud Date: 11/19/2010
Project: UTAH-	-UINTAH		Site: NB	U 921-2	5I PAD		Rig Name No: H&P 311/311, PROPETRO/
Event: DRILLIN	VG		Start Da	te: 11/13	/2010		End Date: 12/27/2010
Active Datum: I Level)	RKB @5,005.00ft (	above Mear	Sea	UWI: N	E/SE/0/9	9/S/21/E/2	5/0/0/26/PM/S/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
12/21/2010	19:30 - 0:00 0:00 - 6:00	4.50 6.00	PROD	02	Đ	P	DRILLED 5909'-6180', 271' IN 4.5 HRS, 60.2 FPH. 100% ROTATING. WOB WAS 15-17K, PUMP #2 AT 110 SPM, 495 GPM, MOTOR TURNING AT 104 RPM WITH TOPDRIVE AT 55 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 250-350 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2250/1950 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 190/119/144. MW 9.4 PPG, 36 VIS, ANY TIME OUR MW WOULD INCREASE WE WOULD LOSE FLUID. LOST AN ADDITIONAL 50 BBLS. MAINTAINING 15% LCM.
12/21/2010	0.00 - 6:00	6.00	PROD	02	U	P	DRILLED 6180'-6511', 331' IN 6 HRS, 55.2 FPH.  100% ROTATING. WOB WAS 17-22K, PUMP #2 AT  110 SPM, 495 GPM, MOTOR TURNING AT 104  RPM WITH TOPDRIVE AT 55 RPM FOR A TOTAL  OF 159 RPM AT THE BIT. DIFFERENTIAL  PRESSURE WAS 250-350 PSI. ON/OFF BOTTOM  PUMP PRESSURE WAS 2250/1950 PSI. ON/OFF  BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS  200/129/154. MW 9.4 PPG, 36 VIS, ANY TIME OUR  MW WOULD INCREASE WE WOULD LOSE FLUID.  LOST AN ADDITIONAL 50 BBLS. HAD TO  INCREASE LCM TO 22% THEN RAISED MW TO 9.9  PPG, 36 VIS. SO HAVE LOST +/- 450 BBLS.
	6:00 - 18:00	12.00	PROD	02	D	P	DRILLED DRILLED 6511'-7061', 550' IN 12 HRS, 45.8 FPH. MADE 2 SLIDES 1 30' SLIDE IN 1.75 HRS AND A 20' SLIDE IN 0.75 HRS. TOTAL SLIDES WERE 50' IN 2.5 HRS, 20 FPH. WOB WAS 20-25K, PUMP #2 AT 110 SPM, 495 GPM, MOTOR TURNING AT 104 RPM WITH TOPDRIVE AT 55 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 200-350 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2300/2050 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 213/138/184. MW 9.4 PPG, 36 VIS, ANY TIME OUR MW WOULD INCREASE WE WOULD LOSE FLUID. LOST AN ADDITIONAL 50 BBLS. HAD TO INCREASE LCM TO 22% AND THEN MAINTAINED 18-22%. RAISED MW TO 10.2
	18:00 - 23:30	5.50	PROD	02	D	P	PPG, 40 VIS. SLIGHT LOSES.  DRILLED 7061'-7320', 259' IN 5.5 HRS, 47.1 FPH.  100% ROTATING. WOB WAS 20-25K, PUMP #2  AT 110 SPM, 495 GPM, MOTOR TURNING AT 104  RPM WITH TOPDRIVE AT 55 RPM FOR A TOTAL  OF 159 RPM AT THE BIT. DIFFERENTIAL  PRESSURE WAS 200-350 PSI. ON/OFF BOTTOM  PUMP PRESSURE WAS 2550/2300 PSI. ON/OFF  BOTTOM TORQUE WAS 11/10K. PU/SO/ROT WAS  216/175/155. MW 10.7 PPG, 40 VIS WITH 16%  LCM.
	23:30 - 0:00	0.50	PROD	07	A	P	RIG SERVICE.
12/22/2010	0:00 - 8:00	8.00	DRLPRO	02	D	P	DRILL & SLIDE 7300' TO 7558, 258', 32-ROP. WOB- 20-25K, PUMP #2 SPM- 110, 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP-ON/OFF 2550/2300 PSI. TQE ON/OFF-19/7K. PU/SO/ROT230/122/163. ROTATE-92%, SLIDE-8%,MW 10.8 PPG, 40 VIS WITH 18% LCM. NO MUD LOST

# **Operation Summary Report**

Well: NBU 921	-25H3DS RED		Spud Co			010	Spud Date: 11/19/2010
Project: UTAH	-UINTAH		Site: NB	U 921-25	I PAD		Rig Name No: H&P 311/311, PROPETRO/
Event: DRILLII	NG		Start Da	te: 11/13	/2010	1	End Date: 12/27/2010
Date	RKB @5,005.00ft (	above Mear	Sea	UWI: N	E/SE/0/9	9/S/21/E/	25/0/0/26/PM/S/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	8:00 - 17:30	9.50	DRLPRO	02	D	Р	DRILLED 7558' TO 7927', 269', 37-ROP MADE A 28' SLIDE IN 90 MINUTES. WOB- 20-25K PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2638/2590 PSI. TQE ON/OFF 11/10K. PU/SO/ROT235/130/167.ROTATE-92%, SLIDE-8% MW 10.8 PPG, 40 VIS WITH 20% LCM. NO MUD LOST
	17:30 - 18:00	0.50	DRLPRO	07	Α	Р	LUBRICATE RIG
	18:00 - 0:00	6.00	DRLPRO	02	D	P	DRILLED 7927' TO 8088, 161',27 -ROP. WOB-20-25K, PUMP #1 SPM-110, 495 GPM, MOTOR RPM-104 ROTARY-55 RPM. DIFF-200-350 PSI. SPP ON/OFF-2693/2560 PSI. TQE ON/OFF 12/10K. PU/SO/ROT-240/138/171.ROTATE-92%, SLIDE-8%, MW 11.0, 40 VIS, 20% LCM. NO MUD LOST
12/23/2010	0:00 - 8:00	8.00	DRLPRO	02	D	P	DRILL 8088 TO 8238,150 ',19 -ROP. WOB- 20-258 PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2701/2590 PSI. TQE ON/OFF 12/10K. PU/SO/ROT- 240/138/171. ROTATE-92%, SLIDE-8%, MW 11.2, 44 VIS, 20% LCM. NO MUD LOST
	8:00 - 15:30	7.50	DRLPRO	02	D	Р	DRILL 8238 TO 8587,349 ', 46-ROP. WOB- 20-251 PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 250-400 PSI. SPP ON/OFF- 2880/2690 PSI. TQE ON/OFF 13/13K. PU/SO/ROT- 265/138/178. ROTATE-98%, SLIDE-2%, MW 11.4, 42 VIS, 20% LCM. NO MUD LOST
	15:30 - 16:00	0.50	DRLPRO	07	Α	Р	LUBRICATE RIG
	16:00 - 22:30	6.50	DRLPRO	02	D	P	DRILL 8587 TO 8782 ,195 ', 30-ROP. WOB- 20-258 PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2960/2750 PSI. TQE ON/OFF 14/13K. PU/SO/ROT- 265/148/179. ROTATE-98%, SLIDE-2%, MW 11.5, 42 VIS, 20% LCM. NO MUD LOST
	22:30 - 23:30	1.00	DRLPRO	05	С	P	CIRCULATE HOLE CLEAN, PUMP PILL
	23:30 - 0:00	0.50	DRLPRO	06	Α	Р	TRIP FOR NEW BIT
12/24/2010	0:00 - 5:30	5.50	DRLPRO	06	Α	P	TRIP OUT FOR BIT
	5:30 - 6:30	1.00	DRLPRO	06	Α	P	LD MOTOR & BIT, PU MOTOR & BIT
	6:30 - 9:30	3.00	DRLPRO	06	Α	₽	TRIP IN W/ NEW MOTOR & BIT
	9:30 - 10:00	0.50	DRLPRO	03	E	X	WASH & REAM TIGHT HOLE AT 4825, LOSING MUD, PUMP LCM SWEEPS, HEALED LOSSES
	10:00 - 13:00	3.00	DRLPRO	05	Α	P	BUILD MUD VOLUME, LOST 300 BBLS MUD, MW-11.6, VIS 42, LCM 20%
	13:00 - 14:00	1.00	DRLPRO	03	E	Х	WASH & REAM TIGHT HOLE 4908 TO 5002
	14:00 - 15:00	1.00	DRLPRO	06	Α	P	TRIP IN HOLE 5002 TO 6134, TIGHT HOLE
	15:00 - 16:00	1.00	DRLPRO	03	E	×	WASH & REAM 6134 TO 6511
	16:00 - 17:30	1.50	DRLPRO	06	Α	P	TRIP IN HOLE TO 8782
	17:30 - 0:00	6.50	DRLPRO	02	D	Р	DRILL 8782 TO 9083 ,301', 46-ROP. WOB- 20-25K PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2960/2750 PSI. TQE ON/OFF 14/12K. PU/SO/ROT- 266/140/185. ROTATE-94%, SLIDE-6%, MW 12.2, 44 VIS, 20% LCM. MUD LOST-300 BBLS, MUD LOST TOTAL HOLE-800 BBLS

5/2/2011 3:38:03PM

# **Operation Summary Report**

Well: NBU 921-	25H3D	RED		Spud Co	onductor	: 11/17/2	2010	Spud Date: 11/19/2010
Project: UTAH-U	UINTAH			Site: NB	U 921-2	5I PAD		Rig Name No: H&P 311/311, PROPETRO/
Event: DRILLIN	G			Start Da	te: 11/13	/2010		End Date: 12/27/2010
Active Datum: F Level)	RKB @5	,005.00ft (	above Mean	Sea	UWI: N	E/SE/0/	9/S/21/E	E/25/0/0/26/PM/S/2074/E/0/690/0/0
Date	Sta	ime rt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
12/25/2010	0:00	- 7:30	7.50	DRLPRO	02	D	Р	DRILL 9083 TO 9440 ,357', 48-ROP. WOB- 20-25k PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2960/2750 PSI. TQE ON/OFF 14/12K. PU/SO/ROT- 266/140/185. ROTATE-94%, SLIDE-6%, MW 12.2, 44 VIS, 20% LCM. LOST CIRCULATION, MUD LOST-500 BBLS, MUD LOSTOTAL HOLE-1000 BBLS
	7:30	- 12:00	4.50	DRLPRO	05	Α	s	BUILD 280 BBLS VOLUME, BUILD RAISE LCM TO 23%,
		- 14:00	2.00	DRLPRO	02	D	Р	DRILL 9440 TO 9525 ,85', 43-ROP. WOB- 20-25K, PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2960/2750 PSI. TQE ON/OFF 14/12K. PU/SO/ROT- 275/148/188. ROTATE-94%, SLIDE-6%, MW 12.2, 44 VIS, 27% LCM. MUD LOST-40BBLS, MUD LOST TOTAL HOLE-1040 BBLS
1		- 14:30	0.50	DRLPRO	07	Α	Р	LUBRICATE RIG
		- 23:30	9.00	DRLPRO	02	D	Р	DRILL 9525 to 9781 ,256', 28-ROP. WOB- 20-25K PUMP #1 SPM- 110 , 495 GPM, MOTOR RPM- 104 ROTARY- 55 RPM. DIFF- 200-350 PSI. SPP ON/OFF- 2960/2750 PSI. TQE ON/OFF 14/12K. PU/SO/ROT- 270/150/188. ROTATE-98%, SLIDE-2%, MW 12.2, 44 VIS, 27% LCM. MUD LOST-40BBLS, MUD LOST TOTAL HOLE-1040 BBLS
	23:30	- 0:00	0.50	DRLPRO	05	Α	Р	PUMP SWEEPS, CIRCULATE 2 BOTTOMS UP
12/26/2010	0:00	- 2:30	2.50	DRLPRO	05	F	Р	CIRCULATE 2 BOTTOMS UP
	2:30	- 10:30	8.00	DRLPRO	06	E	Р	WIPER TRIP TO SHOE, CIRCULATE BOTTOMS U
	10:30	- 16:30	6.00	DRLPRO	06	Α	Р	TRIP OUT FOR CASING
	16:30	- 17:00	0.50	DRLPRO	06	Α	Р	PULL WEAR BUSHING
	17:00	- 20:00	3.00	DRLPRO	12	Α	Р	HOLS SAFETY MEETING, RU CASERS
	20:00	- 0:00	4.00	DRLPRO	12	С	Р	RUN 100 JTS 4 1/2, I-80, BTC, 11.6#, CSG
12/27/2010	0:00	- 4:30	4.50	CSG	12	С	Р	RUN 122 JTS I-80, 11.6#, I-80, 4 1/2 BTC CASING FOR A TOTAL OF 222 JTS, SET SHOE AT 9761 KE SET FLOAT AT 9718. TOP OF MESA VERDE MARKER JT SET@ 7458' KB, TOP OF WASATCH MARKER JT SET @ 4742'KB.
	4:30	- 7:30	3.00	CSG	05	D	Р	CIRCULATE OUT TRIP GAS, 25' FLARE, RD CASERS, RU CEMENTERS, HOLD SAFETY MEETING.
		- 10:30 - 14:00	3.50	CSG	12	A	P	PRESSURE TEST TO 5000 PSI. PUMP AHEAD 40 BBLS OF H20 SPACER, PUMP 213 BBLS (620 SX OF 12.6#, 1.93 YD, 10.36 GAL/SK) LEAD ECONO CEMENT. PUMP 264 BBLS (1185 SX OF 14.3#, 1.2 YD, 5.41 GAL/SK) POZ PREMIUM 50/50 TAIL CEMENT. SHUT DOWN AND WASH LINES, DROP 4.5" TOP PLUG, PUMP 152 BBLS OF H20, INITIAL PSI OF 150, LIFT PSI OF 2100 PSI. LOST RETURNS AT START OF DISPLACEMENT.LAND PLUG AT 2250 PSI, PRESSURE UP CSG TO 3100 PSI AND HOLD FOR 5 MIN. RELEASE PRESSURE AND FLOAT HELD. EST TOC TAIL @ 4500', LEAD @ 1000'. HOLD RIG DOWN MEETING AND RIG DOWN HALLIBURTON CEMENTERS.  NIPPLE DOWN BOP'S AND SET SLIPS UNDER STACK @ 97,000 LBS. CUT OFF CSG. CLEAN PITS. RELEASE RIG 12/27/2010 14:00. STORE 800

5/2/2011 3:38:03PM

			0			KIES R Summa	ary Report			
Well: NBU 921	-25H3DS RED		Spud Co	onductor	: 11/17/2	2010	Spud Date: 11	//19/2010		
Project: UTAH-	-UINTAH		<del></del>					Rig Name No: H&P 311/311, PROPETRO/		
Event: DRILLIN			Start Da	ite: 11/13	3/2010			End Date: 12/27/2010		
Active Datum:		above Mean				9/S/21/E/	25/0/0/26/PM/S	/2074/E/0/690/0/0		
.evel) Date	U 921-25H3DS RED Spud Cond UTAH-UINTAH Site: NBU RILLING Start Date: atum: RKB @5,005.00ft (above Mean Sea	Code	Sub	P/U	MD From	Operation				
	Start-End	(hr)			Code		<b>(ft)</b>	CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28 SPUD DATE/TIME: 11/19/2010 21:00 SURFACE HOLE: 11 Surface From depth: 40 Surface From depth: 2,740 Total SURFACE hours: 31.50 Surface Casing size: 8.625" # of casing joints ran: 61 Casing set MD: 2,703.0 # sx of cement: 350/700 Cement blend (ppg:) 15.8 Cement yield (ft3/sk): 1.15 # of bbls to surface: 0 Describe cement issues: NO RETURNS Describe hole issues: LOST RETURNS AT 1580' PRODUCTION: 7.875 Rig Move/Skid start date/time: 12/11/2010 21:00 Rig Move/Skid start date/time: 12/11/2010 21:00 Rig Move/Skid start date/time: 12/27/2010 10:30 Total MOVE hours: 133.5 Prod Rig Spud date/time: 12/27/2010 14:00 Total SPUD to RR hours:207.0 Planned depth MD 9,791 Planned depth TVD 9,671 Actual TVD: 9,651 Open Wells \$: \$1,036,099 AFE \$: \$767,404 Open wells \$:fi: \$105.93  PRODUCTION HOLE: Prod. From depth: 2,761 Prod. To depth: 9,871 Total PROD hours: 134.5 Log Depth: NO LOGS RUN Production Casing size: 4 1/2 # of casing joints ran: 232 Casing set MD: 9,760.6 # sx of cement: 1,805 Cement blend (ppg:) LEAD 12.6, TAIL 14.3 Cement yield (ft3/sk): LEAD 1.93, TAIL 1.25 Est. TOC (Lead & Tail) or 2 Stage: LEAD 1000', TAII 4500' Describe cement issues: LOSS CIRC START OF DISPLACEMENT Describe hole issues: NONE		
								4500' Describe cement issues: LOSS CIRC START OF DISPLACEMENT		

5/2/2011 3:38:03PM 9

					US	ROCI	KIES RE	EGION
	e de la companya de			0	perat	ion S	umma	ary Report
Well: NBU 921	-25H3D	S RED		Spud Co	onductor	: 11/17/2	:010	Spud Date: 11/19/2010
Project: UTAH	-UINTAH	ł		Site: NB	U 921-2	51 PAD		Rig Name No: GWS 1/1
Event: COMPI	ETION			Start Da	te: 3/15/	2011		End Date: 3/31/2011
Active Datum: Level)	RKB @5	i,005.00ft (i	above Mean	Sea	UWI: N	IE/SE/0/9	9/S/21/E/2	25/0/0/26/PM/S/2074/E/0/690/0/0
Date	Sta	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
3/15/2011	6:45	- 7:00	0.25	COMP	48		P	HSM. HIGH PSI LINES.
		- 15:00	8.00	COMP	37	В	P	MIRU B&C QUICK TEST & CASED HOLE SOLUTIONS. PSI TEST 4 1/2 CSG & BOTH FRAC VALVES AS PER PROCEDURE. PSI TEST & CHECK FOR COMUNICATION INSIDE 4 1/2. GOOD TEST. RDMO B&C QUICK TEST. PERF STG1) PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH PERF F/ 9486'-87', 4 SPF, 4 HOLES. 9466'-67, 3 SPF, 3 HOLES. 9352'-54', 3 SPF, 6 HOLES. 9282'-83', 4 SPF, 4 HOLES. 9254'-55', 4 SPF, 4 HOLES. 21 HOLES. POOH, SWIFN.
3/16/2011		- 7:00	0.25	COMP	48		Р	HSM. MIRU.
		- 16:45	9.75	COMP	46	E	Р	MIRU SUPERIOR FRAC SERV.
3/17/2011		- 18:00 - 6:50	0.08	COMP	33 48	В	P P	PRESSURE TEST LINES TO 8000 PSI. SAND MASTER THAT HOLDS ALL THE RESIN SAND, BELT CAME APPART. CANNOT PUMP UNTIL BELT IS REPAIRD. SDFN HSM. SIME OPS

Well: NBU 921-25H3DS RED	Spud Cor	nductor: 11/17/2010	Spud Date: 1	11/19/2010
Project: UTAH-UINTAH	Site: NBL	J 921-25I PAD		Rig Name No: GWS 1/1
Event: COMPLETION	Start Date	e: 3/15/2011		End Date: 3/31/2011
Active Datum: RKB @5,005.00ft (above Mean evel)	Sea	UWI: NE/SE/0/9/S/21/E	/25/0/0/26/PM/	S/2074/E/0/690/0/0
Date Time Duration Start-End (hr)	Phase	Code Sub P/U Code	MD From (ft)	Operation
지수의 그 보다는 점점 아내가 있는 바람이 되었다. 그 아는 아는 아는 그를 보고 있는데 그렇게 되었다.	COMP			FRAC STG 1)WHP 1285 PSI, BRK 3380 PSI @ 4.8 BPM. ISIP 2656 PSI, FG. 72. PUMP 100 BBLS @ 43.2 BPM @ 5718 PSI = 85% HOLES OPEN. ISIP 2829 PSI, FG. 74, NPI 153 PSI. MP 6781 PSI, MR 51.8 BPM, AP 5558 PSI, AR 46.5 BPM, PMP 1127 BBLS SW & 32,033 LBS OF 30/50 SND 4,798 LBS OF 20/40 SLC SND. TOTAL PROP 36,831 LBS. SWI, X-OVER FOR WL.  PERF STG 2)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CPB @ 9235' P/U PERF F/ 9204'-05', 4 SPF, 3 HOLES. 9160'-61', 3 SPF, 6 HOLES. 9160'-61', 3 SPF, 6 HOLES. 9104'-05', 3 SPF, 6 HOLES. 90', X-OVER FOR FRAC CREW.  FRAC STG 2) WHP 1800 PSI, BRK 3007 PSI @ 4.8 BPM, 1SIP 2831 PSI, FG. 75, NPI 315 PSI. MP 6371 PSI, MR 50.3 BPM, AP 4956 PSI, AR 48.9 BPM, PMP 1945 BBLS SW & 70,676 LBS OF 30/50 SND 4,703 LBS OF 20/40 SLC SND. TOTAL PROP 75379 LBS SWI, X-OVER FOR WL.  PERF STG 3) PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CPB @ 9054' P/U PERF F/ 9004-06. 3 SPF. 6 HOLES. 21 HOLES. POOH, X-OVER FOR FRAC CREW.  FRAC STG 3) WHP 2236 PSI, BRK 3537 PSI @ 4.8 BPM, 1SIP 2559 PSI, FG 0.72. PUMP 100 BBLS @ 41.9 BPM @ 5751 PSI = 74% HOLES OPEN. ISIP 2723 PSI, FG .74, NPI 164 PSI. MP 6780 PSI, MR 51.2 BPM, AP 5410 PSI, AR 48.8 BPM, PMP 894 BBLS SW & 33,522 LBS OF 30/50 SND 8,788-89.3 SPF.3 HOLES. 21 DEG PHASING RIH SET CPB @ 8866' P/U PERF F/ 8828-29.3 SPF.3 HOLES 8720-23.3 SPF.3 HOLES 8720-23.3 SPF.3 HOLES 8720-23.3 SPF.6 HOLES 88643-45.3 SPF.6 HOLES. 24 HOLES. 8643-45.3 SPF.6 HOLES. 24 HOLES.

5/6/2011 2:53:52PM

	C	peration Sum	nmary Report
Well: NBU 921-25H3DS RED	Spud C	onductor: 11/17/2010	Spud Date: 11/19/2010
Project: UTAH-UINTAH	Site: NE	BU 921-25I PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Da	ate: 3/15/2011	End Date: 3/31/2011
Active Datum: RKB @5,005.00ft (above Mean Level)	n Sea	UWI: NE/SE/0/9/S/2	1/E/25/0/0/26/PM/S/2074/E/0/690/0/0
Date Time Duration Start-End (hr)	Site: NBU 921-25I PAD	Operation  FRAC STG 4)WHP 2150 PSI, BRK 2866 PSI @ 4.7 BPM. ISIP 2074 PSI, FG .68. PUMP 100 BBLS @ 50 BPM @ 5672 PSI = 78% HOLES OPEN. ISIP 2475 PSI, FG .72, NPI 401 PSI. MP 6173 PSI, MR 53.3 BPM, AP 4852 PSI, AR 49.7 BPM, PMP 1350 BBLS SW & 48,568 LBS OF 30/50 SND & 4,805 LBS OF 20/40 SLC SND. TOTAL PROP 53,373 LBS, SWI, X-OVER FOR WL.  PERF STG 5)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RiH SET CBP @ 8565' P/U PERF F/ 8512'-15', 4 SPF, 12 HOLES. 8456'-57', 4 SPF, 4 HOLES. 8298'-00', 3 SPF, 6 HOLES. 22 HOLES. POOH, SWIFN.	

5/6/2011

# Operation Summary Report

Well: NBU 921-	25H3DS RED		Spud C	onductor	: 11/17/2	010	Spud Date: 11	/19/2010
Project: UTAH-I	UINTAH		Site: NE	SU 921-2	5I PAD			Rig Name No: GWS 1/1
Event: COMPLI	ETION		Start Da	te: 3/15/	2011			End Date: 3/31/2011
Active Datum: F Level)	RKB @5,005.00ft	(above Mean	Sea	UWI: N	NE/SE/0/9	)/S/21/E	/25/0/0/26/PM/S	/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/18/2011	8:00 - 18:00	10.00	COMP	36	B B	<b>P</b>	(ft) 223 (ft)	FRAC STG 5) WHP 1383 PSI, BRK 4190 PSI @ 4.9 BPM. ISIP 2164 PSI, FG .70. PUMP 100 BBLS @ 38.4 BPM @ 6501 PSI = 60% HOLES OPEN. ISIP 2262 PSI, FG .71, NPI 98 PSI. MP 6939 PSI, MR 50.4 BPM, AP 6092 PSI, AR 44.6 BPM, PMP 758 BBLS SW & 21,801 LBS OF 30/50 SND & 5,240 LBS OF 20/40 SLC SND. TOTAL PROP 27,041 LBS. SWI X-OVER FOR WL. ((CAS UNIT SHUT DOWN IN FLUSH. WAS ABLE T/ FINISH FLUSH. SD T/ FIX BELT ON CAS UNIT.))  PERF STG 6)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8260' P/U PERF F/ 8228'-30', 3 SPF, 6 HOLES. 8184'-89', 3 SPF, 6 HOLES. 8184'-89', 3 SPF, 6 HOLES. 8174'-76', 4 SPF, 8 HOLES. 8174'-96', 4 SPF, 8 HOLES. 8175'-96'-95', 4 SPF, 8 HOLES. 8175'-96'-95', 4 SPF, 8 HOLES. 8175'-96'-95', 4 SPF, 8 HOLES. 8175'-96'-96', 4 SPF, 8 HOLES. 8175'-96'-96', 4 SPF, 8 HOLES. 8175'-96'-96', 4 SPF, 8 HOLES. 8174'-76', 3 SPF, 6 HOLES.
								POOH, SWIFN.

			0	perat	ion S	Summa	ary Report
Well: NBU 921	-25H3DS RED	20.00 And 2 - 2000	Spud Co	onductor	: 11/17/	2010	Spud Date: 11/19/2010
Project: UTAH-	UINTAH		Site: NB	U 921-2	5I PAD		Rig Name No: GWS 1/1
Event: COMPL	ETION		Start Da	te: 3/15/	2011		End Date: 3/31/2011
Active Datum: I Level)	RKB @5,005.00ft (a	above Mean	Sea	UWI: N	IE/SE/0	/9/S/21/E/	/25/0/0/26/PM/S/2074/E/0/690/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)
	6:45 - 6:45	0.00	COMP	36	E	Р	FRAC STG #8] MESAVERDE 7,574'-7,742' [23 HOLES]
			·				FRAC STG #8] WHP=1,123#, BRK DN PERFS=2,039#, @=4.4 BPM, INJ RT=47.8, INJ PSI=6,511#, ISIP=1,328#, FG=.61, PUMP'D 1,668 BBLS SLK WTR W/ 63,453# 30/50 MESH W/ 4,804# RESIN COAT IN TAIL, 68,257## TOTAL PROP. ISIP=2,304#, FG=.74, AR=49.7, AP=4,643#, MR=50.8, MP=6,691#, NPI=976# 14/23 CALC PERFS OPEN. 60%
3/30/2011	7:00 - 10:00	3.00	COMP	34	ļ	P	TOTAL BBLS=10,118  TOTAL SAND=392,208#  1050 GALS SCALE INHIB  197 GALS BIOCIDE  SICP 630 PSI, MIRU CASEDHOLE WIRELINE, RIH  W/ 8 K CBP & SET @ 7,164', RDMO.
	12:00 - 17:30	5.50	COMP				MIRU, ND FRAC VALVE, NU BOP, INSTAL CAGE OVER WH ON 25/3AS, RU FLOOR & TBG EQUIP, SPOT TBG TRAILER, TALLY & PU TBG TO 5,700', SWI, SDFN.
3/31/2011	7:00 - 7:15	0.25	COMP	48		Р	HSM, SLIPS, TRIPS & FALLS, PRESS TESTING STAY AWAY FROM PUMPING LINES.

5/6/2011 2:53:52PM

### **Operation Summary Report**

Well-NBU 004	SEMS DE DED			<u> </u>				9/2010
			······································			.010	Spuu Date. 11/1	#*************************************
						T		
		Site: NBU 921-25  PAD   Rig Name No: GWS 1/1						
Level)	(KB @5,005.00it (	(above ivicari	Sea	OVVI. IN	IE/SE/U/	51312 IIE	123/0/0/20/19/0/3/20	074/E/0/090/0/0
Date	Time Start-End		Phase	Code	1 5 "" 4 44	P/U		Operation
	7:15 - 18:30		COMP	44	С	Р	5 H 8 F F	KILL PLUG @ 7,164', INSTAL STRIPPING RUBBER RU POWER SWIVEL, FILL TBG BREAK CIRC, PRESS TEST BOP TO 3,000 PSI, START DRLG PLUGS. ALL SURFACE CSG VAVLES OPEN TO
							- 1	N 11 MIN. 200 PSI INCREASE RIH, CSG PRESS 0
							1	N 8 MIN. 800 PSI INCREASE RIH, CSG PRESS 50
		Spud Conductor: 11/17/2010   Spud Date: 11/19/2010     Site: NBU 921-25i PAD	N 8 MIN. 250 PSI INCREASE RIH, CSG PRESS 50					
	NBU 921-26H3DS RED	N 9 MIN. 300 PSI INCREASE RIH, CSG PRESS 75						
		N 7 MIN. 250 PSI INCREASE RIH, CSG PRESS 150						
		N 10 MIN. 500 PSI INCREASE RIH, CSG PRESS						
			Spud Conductor: 11/17/2010   Spud Date: 11/19/2010   Spud Date: 31/15/2011   Spud Date: 31/15/2011   End Date: 3/31/2011   End Dat					
							t	N 7 MIN. 500 PSI INCREASE RIH, CSG PRESS 500
	U 921-25H3DS RED	N 8 MIN. 350 PSI INCREASE RIH, CSG PRESS 600						
		OUT D/O, FINALLY WEATHERFORD SHOWED UP						
							# E S 1 F 2 F 2 E	AFTER DRLG 2 ND PLUG, FILLING 5 GALLON BUCKET IN 7-10 MINUTES, RAN LINE TO PIT. HOOKUP RIG PUMP TO GET AN INJECTION RATE DOWN SURFACE CSG PRESS UP TO 900 PSI, BLED OFF 10-15 PSI IN 10 MINUTES. SHUT SOURFACE CSG IN & MONITOR PRESS, @ 12:30PM= 50 PSI, 12:45PM= 150 PSI, 1:00PM= 150 PSI, 2:00PM= 200 PSI, 3:20PM= 270 PSI, 4:45PM 270 PSI, 5:15PM 170 PSI, PRESS DROPPED 100 PSI AFTER LANDING TBG & SHUTTING FLOW UP 1/2" CSG OFF, 4 1/2" CSG PRESS 2,350 PSI, BLED OFF PRESS OFF SURFACE CSG TO PIT & LEFT OPEN, FB CREW WILL WATCH & MONITOR
							9	9,600', 113' PAST BTM PERF, W/ 303 JTS 2 3/8"

#### US ROCKIES REGION **Operation Summary Report** Spud Conductor: 11/17/2010 Spud Date: 11/19/2010 Well: NBU 921-25H3DS RED Site: NBU 921-251 PAD Rig Name No: GWS 1/1 Project: UTAH-UINTAH Event: COMPLETION Start Date: 3/15/2011 End Date: 3/31/2011 Active Datum: RKB @5,005.00ft (above Mean Sea UWI: NE/SE/0/9/S/21/E/25/0/0/26/PM/S/2074/E/0/690/0/0 Level) P/U MD From Time Duration Phase Code Sub Operation Date Code Start-End (ft) (hr) HANGER & LAND TBG W/ 286 JTS 2 3/8" L-80, EOT 9,077.50'. RD POWER SWIVEL, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT W/ 3,100 PSI, LET BIT FALL FOR 20 MIN. TURN OVER TO FLOW BACK CREW, SDFN. KB= 25' 4 1/16" WEATHERFORD HANGER= .83' TBG DELIVERED 314 JTS 286 JTS 2 3/8" L-80 = 9,049.47' **TBG** USED 286 JTS POBS= 2.20' TRG RETURNED 28 JTS (1W/ BAD THREADS) EOT @ 9,077.50' SN @ 9,075.30' TWTR= 10.318 BBLS TWR= 2,000 BBLS TWLTR= 8,316 BBLS CALLED CDC TALKED TO BECKY WELL TURNED TO SALES @ 18:00 HR ON 3/31/11 18:00 - 18:00 0.00 PROD 50 - 1800 MCFD, 1920 BWPD, FTP 150#, CP 2500#, CK 20/64" 7 AM FLBK REPORT: CP 2800#, TP 2500#, 20/64" 7:00 33 4/1/2011 Α CK, 55 BWPH, 1/2 C SAND, - GAS TTL BBLS RECOVERED: 2855 **BBLS LEFT TO RECOVER: 7463** 7 AM FLBK REPORT: CP 3150#, TP 2400#, 20/64" 7:00 33 Α 4/2/2011 CK, 40 BWPH, TBLSPN SAND, - GAS TTL BBLS RECOVERED: 3950 **BBLS LEFT TO RECOVER: 6368** 7 AM FLBK REPORT: CP 3000#, TP 2250#, 20/64" 4/3/2011 7:00 33 Α CK, 35 BWPH, TSP SAND, - GAS TTL BBLS RECOVERED: 4790 **BBLS LEFT TO RECOVER: 5528** 7 AM FLBK REPORT: CP 2850#, TP 2150#, 20/64" 7:00 33 Α 4/4/2011 CK, 27 BWPH, 1/2 TSP SAND, - GAS TTL BBLS RECOVERED: 5486 **BBLS LEFT TO RECOVER: 4832** 7 AM FLBK REPORT: CP 2650#, TP 2050#, 20/64" 7:00 33 Α 4/5/2011 CK, 19 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 6002 **BBLS LEFT TO RECOVER: 4316** 7:00 -50 WELL IP'D ON 4/8/11 - 2801 MCFD, 0 BOPD, 528 4/8/2011 BWPD, CP 2569#, FTP 1854#, CK 20/64", LP 189#,

5/6/2011 2:53:52PM 7

**24 HRS** 



Site: NBU 921-25l Pad Well: NBU 921-25H3DS

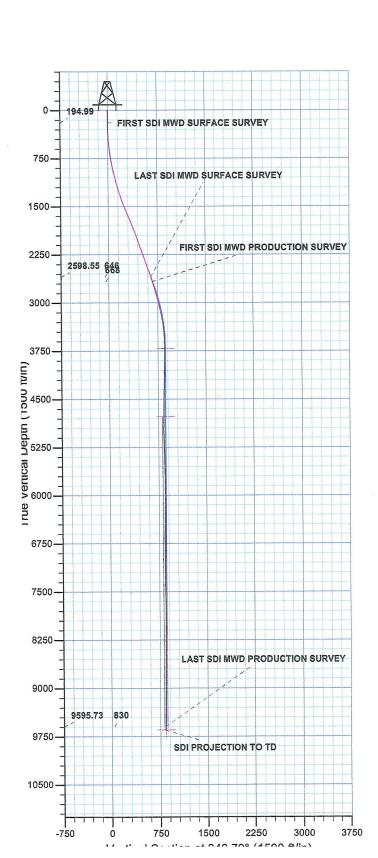
Wellbore: OH Design: OH

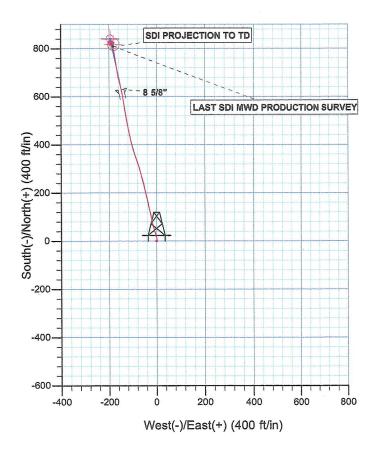


WELL DETAILS: NBU 921-25H3DS GL 4980' & RKB 25 @ 5005.00ft (H&P 311) Latittude 40° 0' 19.663 N Easting 2062597.96 Longitude 109° 29' 32.762 W +N/-S 0.00 14531604.31

Azimuths to True North Magnetic North: 11.15° Magnetic Field Strength: 52389.6snT Dip Angle: 65.89°







#### PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SEC 25 T9S R21E

System Datum: Mean Sea Level



# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 921-25I Pad NBU 921-25H3DS

OH

Design: OH

# **Standard Survey Report**

28 December, 2010





#### SDI Survey Report



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 921-25l Pad

Wellbore:

NBU 921-25H3DS

Design:

OH

Local Co-ordinate Reference:

**Survey Calculation Method:** 

**TVD Reference:** 

MD Reference:

North Reference:

Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

Minimum Curvature

EDM5000-RobertS-Local

**Project** 

Uintah County, UT UTM12

Map System:

Universal Transverse Mercator (US Survey Feet)

Geo Datum:

NAD 1927 - Western US

Map Zone:

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

NBU 921-25I Pad, SEC 25 T9S R21E

Site Position:

Northing:

14,531,604.32 usft

Latitude:

40° 0' 19.663 N

From: **Position Uncertainty:**  Lat/Long

Easting: Slot Radius: 2.062.597.96 usft 13.200 in

Longitude:

109° 29' 32.762 W

0.97°

0.00 ft

**Grid Convergence:** 

Well

NBU 921-25H3DS, 2035' FSL 684' FEL

**Well Position** 

+N/-S +E/-W 0.00 ft 0.00 ft Northing:

14.531.604.32 usft 2,062,597.96 usft Latitude: Longitude: 40° 0' 19.663 N

**Position Uncertainty** 

0.00 ft

Easting: Wellhead Elevation:

ft

**Ground Level:** 

109° 29' 32.762 W

4,980.00 ft

Wellbore

ОН

**Magnetics** 

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

11/19/2010

11.15

65.89

52,390

Design

ОН

**Audit Notes:** 

Version:

1.0

Phase:

**ACTUAL** 

Tie On Depth:

0.00

**Vertical Section:** 

Depth From (TVD)

0.00

+N/-S

+E/-W

Direction

(ft) (ft) (°) (ft) 0.00 346.79 0.00

Survey Program

Date 12/28/2010

From (ft)

To

(ft)

Survey (Wellbore)

**Tool Name** 

Description

21.00 2,774.00

2.701.00 Survey #1 SDI MWD Surface (OH) 9.781.00 Survey #2 SDI MWD Production (OH)

MWD SDI MWD SDI

MWD - Standard ver 1.0.1 MWD - Standard ver 1.0.1

Survey

						V/it1	Danisa	B. 11.1	<b>-</b>
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21.00	0.00	0.00	21.00	0.00	0.00	0.00	0.00	0.00	0.00
195.00	0.91	125.33	194.99	-0.80	1.13	-1.04	0.52	0.52	0.00
FIRST SDI N	IWD SURFACE	SURVEY							
285.00	1.24	356.86	284.99	-0.24	1.66	-0.61	2.16	0.37	-142.74
375.00	2.58	356.49	374.93	2.75	1.48	2.34	1.49	1.49	-0.41
465.00	4.43	354.33	464.76	8.24	1.01	7.79	2.06	2.06	-2.40
555.00	6.04	342.75	554.38	16.22	-0.74	15.96	2.13	1.79	-12.87
645.00	7.36	345.70	643.77	26.33	-3.56	26.44	1.52	1.47	3.28
735.00	8.21	338.72	732.94	37.90	-7.32	38.57	1.41	0.94	-7.76



#### **SDI** Survey Report



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site:

NBU 921-25I Pad NBU 921-25H3DS

Well: Wellbore: Design:

OH OH Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** 

Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

True

Minimum Curvature

EDM5000-RobertS-Local

ırvey											
	Measured			Vertical			Vertical	Dogleg	Build	Turn	
	Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
				994.90	51.45	-11.85	52.79	2.25	2.07	5.64	
	825.00	10.07	343.80	821.80	51.45	-11.00	52.79	2.20	2.07	5.04	
	915.00	11.85	346.86	910.15	68.00	-16.14	69.89	2.08	1.98	3.40	
	1,005.00	12.85	348.96	998.07	86.82	-20.16	89.13	1.22	1.11	2.33	
	1,095.00	14.51	346.73	1,085.51	107.62	-24.67	110.41	1.93	1.84	-2.48	
	1,185.00	16.06	346.68	1,172.33	130.71	-30.12	134.14	1.72	1.72	-0.06	
	1,275.00	17.34	349.03	1,258.53	155.99	-35.54	159.99	1.61	1.42	2.61	
	4 265 00	18.00	345.07	1,344.29	182.60	-41.68	187.29	1.52	0.73	-4.40	
	1,365.00 1,455.00	19.83	348.16	1,429.42	210.98	-48.39	216.45	2.32	2.03	3.43	
		20.73	345.41	1,513.85	241.33	-55.54	247.64	1.46	1.00	-3.06	
	1,545.00		345.41	1,513.85	272.61	-64.08	280.04	1.01	0.86	-1.48	
	1,635.00	21.50		-	305.01	-73.56	313.75	1.22	1.18	-0.88	
	1,725.00	22.56	343.29	1,681.23	305.01	~/3.56	313.75	1.22	1.10	-0.00	
	1,815.00	21.60	340.62	1,764.63	337.17	-84.02	347.45	1.54	-1.07	-2.97	
	1,905.00	20.87	342.19	1,848.52	368.06	-94.43	379.90	1.03	-0.81	1.74	
	1,995.00	21.20	344.71	1,932.53	399.02	-103.62	412.14	1.07	0.37	2.80	
	2,085.00	20.27	347.04	2,016.70	429.91	-111.41	444.00	1.38	-1.03	2.59	
	2,175.00	17.51	348.63	2,101.84	458.38	-117.57	473.12	3.12	-3.07	1.77	
		40.04	050.00	2 497 20	486.13	-122.74	501.31	1.79	1.70	1.77	
	2,265.00	19.04	350.22	2,187.30				0.91	0.74	-1.57	
	2,355.00	19.71	348.81	2,272.20	515.48		531.13			2.72	
	2,445.00	19.07	351.26	2,357.10	544.90		560.96	1.15	-0.71		
	2,535.00	19.75	350.33	2,441.98	574.43		590.79	0.83	0.76	-1.03	
	2,625.00	19.34	350.33	2,526.80	604.11	-143.20	620.85	0.46	-0.46	0.00	
	2,701.00	19.16	347.79	2,598.55	628.70	-147.95	645.88	1.13	-0.24	-3.34	
	LAST SDI M	WD SURFACE S	URVEY								
	2,774.00	16.84	343.09	2,667.98	650.53	-153.56	668.41	3.75	-3.18	-6.44	
		IWD PRODUCTION		•							
	2,868.00	16.01	346.71	2,758.14	676.18	-160.50	694.96	1.40	-0.88	3.85	
	2,963.00	15.39	351.01	2,849.60	701.38		720.64	1.39	-0.65	4,53	
	3,057.00	15.04	352.33	2,940.30	725.79		745.22	0.52	-0.37	1.40	
	0,007.00	.0.01	002.00	2,0 10100							
	3,151.00	13.54	350.84	3,031.39	748.74		768.33	1.64	-1.60	-1.59	
	3,246.00	13.63	350.92	3,123.74	770.77		790.59	0.10	0.09	0.08	
	3,340.00	12.22	348.46	3,215.35	791.46	-179.72	811.58	1.61	-1.50	-2.62	
	3,435.00	8.97	337.65	3,308.73	808.16	-184.55	828.95	4.00	-3.42	-11.38	
	3,529.00	6.42	326.31	3,401.88	819.31	-190.25	841.11	3.14	-2.71	-12.06	
	3,624.00	3.07	327.80	3,496.54	825.89	-194.55	848.49	3.53	-3.53	1.57	
	3,718.00	1.93	311.72	3,590.45	829.07		852.17	1.41	-1.21	-17.11	
	•		291.77	3,685.41	830.57		854.15	0.81	-0.55	-21.00	
	3,813.00	1.41			830.48		854.47	1.31	-0.37	-61.70	
	3,907.00	1.06	233.77	3,779.39			853.20	1.27	0.09	-69.66	
	4,001.00	1.14	168.29	3,873.38	829.06	-201.64	003.20	1.47	0.08	-09.60	,
	4,096.00	1.49	182.70	3,968.35	826.90	-201.51	851.07	0.50	0.37	15.17	
	4,190.00	1.58	183.58	4,062.32	824.38	-201.65	848.65	0.10	0.10	0.94	ļ
	4,284.00	1.67	175.76	4,156.28	821.72		846.06	0.25	0.10	-8.32	:
	4,379.00	2.02	170.57	4,251.23	818.69		843.02	0.41	0.37	-5.46	i
	4,473.00	1.93	97.80	4,345.19	816.84		840.80	2.49	-0.10	-77.41	



# SDI

Survey Report



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Site:

NBU 921-25l Pad NBU 921-25H3DS

Well: Wellbore: Design:

ОН ОН

Uintah County, UT UTM12

Local Co-ordinate Reference: TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311) GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

True

Minimum Curvature EDM5000-RobertS-Local

urvey											
	Measured			Vertical			Vertical	Dogleg	Build	Turn	
	Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
	4,567.00	2.46	91.91	4,439.12	816.56	-195.83	839.70	0.61	0.56	-6.27	
	4,662.00	1.82	100.31	4,534.06	816.22	-192.30	838.57	0.75	-0.67	8.84	
	4,756.00	1.67	118.54	4,628.01	815.30	-189.63	837.06	0.61	-0.16	19.39	
		1.67	120.47	4,722.97	813.94	-187.22	835.18	0.06	0.00	2.03	
	4,851.00 4,945.00	1.32	137.61	4,816.94	812.44	-185.31	833.29	0.60	-0.37	18.23	
	4,040.00	1.02	101101	.,							
	5,039.00	1.33	145.55	4,910.92	810.74	-183.97	831.33	0.20	0.01	8.45	
	5,134.00	0.70	2.00	5,005.91	810.41	-183.32	830.86	2.04	-0.66	-151.11	
	5,228.00	2.29	332.64	5,099.87	812.66	-184.17	833.24	1.82	1.69	-31.23	
	5,322.00	1.93	331.41	5,193.81	815.71	-185.79	836.58	0.39	-0.38	-1.31	
	5,417.00	1.85	333.52	5,288.76	818.49	-187.24	839.62	0.11	-0.08	2.22	
	5 544 00	4.67	222.02	5,382.71	821.06	-188.55	842.42	0.20	-0.19	-1.59	
	5,511.00	1.67	332.03 329.30	5,362.71 5,476.68	823.20	-189.75	844.78	0.28	-0.37	-2.90	
	5,605.00	1.32		5,476.66 5,570.66	824.78	-109.75 -190.97	846.60	0.39	-0.19	-16.07	
	5,699.00	1.14	314.19	5,570.66 5,665.65	825.89	-190.97	847.95	0.34	-0.34	-2.95	
	5,794.00	0.82 0.97	311.39 272.53	5,759.64	826.37	-192.16	848.71	0.65	0.16	-41.34	
	5,888.00	0.57	272.00	0,700.04	020.07	100.10					
	5,982.00	1.06	259.34	5,853.62	826.24	-195.11	848.97	0.27	0.10	-14.03	
	6,077.00	0.88	241.06	5,948.61	825.73	-196.61	848.81	0.37	-0.19	-19.24	
	6,171.00	0.97	223,31	6,042.60	824.80	-197.79	848.17	0.32	0.10	-18.88	
	6,266.00	1.06	207.05	6,137.58	823.43	-198.74	847.06	0.32	0.09	-17.12	
	6,360.00	1.14	202.13	6,231.56	821.79	-199.49	845.63	0.13	0.09	-5.23	
	0.454.00	4.44	191.53	6,325.55	820.01	-200.03	844.02	0.22	0.00	-11.28	
	6,454.00	1.14		6,420.52	817.78	-200.03	841.87	0.60	0.46	-16.42	
	6,549.00	1.58	175.93		815.05	-199.92	839.16	0.19	0.19	-0.47	
	6,643.00	1.76	175.49	6,514.48			837.54	2.52	-0.19	-95.74	
	6,737.00	1.58	85.49	6,608.45	813.71	-198.51 -195.56	838.26	1.62	1.02	-36.36	
	6,832.00	2.55	50.95	6,703.39	815.14	-185.50	838.20	1.02	1.02	-50.50	
	6,926.00	2.20	52.71	6,797.31	817.55	-192.50	839.91	0.38	-0.37	1.87	
	7,020.00	1.93	56.67	6,891.25	819.52	-189.75	841.19	0.32	-0.29	4.21	
	7,115.00	1.85	73.54	6,986.20	820.83	-186.94	841.83	0.59	-0.08	17.76	
	7,209.00	1.67	85.41	7,080.16	821.37	-184.12	841.71	0.43	-0.19	12.63	
	7,304.00	1.49	87.34	7,175.12	821.54	-181.51	841.28	0.20	-0.19	2.03	
				7.000.00	004.70	470 77	940.92	0.20	0.38	-2.05	
	7,398.00	1.85	85.41	7,269.08	821.72	-178.77	840.82	0.39			
	7,493.00	0.70	344.42	7,364.06	822.40	-177.40	841.17	2.21	-1.21	-106.31	
	7,587.00	2.02	316.65	7,458.03	824.15	-178.69	843.18	1.53	1.40	-29.54	
	7,681.00	1.63		7,551.99	826.31	-180.77	845.76	0.42		-1.26	
	7,776.00	0.88	314.45	7,646.96	827.79	-182.23	847.53	0.79	-0.79	-1.07	
	7,870.00	0.53	293.62	7,740.96	828.47	-183.15	848.40	0.46	-0.37	-22.16	
	7,965.00	0.35		7,835.95	828.51	-183.72	848.57	0.49		-63.93	
	8,059.00	0.28		7,929.95	828.55	-184.29	848.74	0.49		63.57	
	8,059.00			8,023.95	828.93	-184.99	849.27	0.15		13.37	
				8,118.95	829.09	-185.51	849.54	0.35		-51.27	
	8,248.00	0.27	200.01	0,110.85	020.00	-100,01	5-10,0-7	0,50	50		
	8,342.00	0.53	188.87	8,212.94	828.60	-185.79	849.13	0.53	0.28	-71.96	
	8,437.00			8,307.94	827.37	-185.91	847.96	0.47	0.46	-5.11	
	8,531.00			8,401.92	825.50	-185.80	846.12	0.46		-13.84	
	8,626.00			8,496.89	823,20	-185,49	843.80	0.19		2.68	



#### **SDI** Survey Report



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site:

NBU 921-251 Pad

Well: Wellbore:

Design:

NBU 921-25H3DS OH OH Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

True

Minimum Curvature

EDM5000-RobertS-Local

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,721.00	1.85	182.00	8,591.85	820.44	-185.40	841.10	0.46	0.38	8.88
8,815.00	0.44	246.69	8,685.83	818.78	-185.79	839.57	1.82	-1.50	68.82
8,909.00	0.45	246.12	8,779.83	818.48	-186.46	839.44	0.01	0.01	-0.61
9,004.00	0.35	217.77	8,874.82	818.10	-186.98	839.18	0.23	-0.11	-29.84
9,098.00	0.18	154.31	8,968.82	817.74	-187.09	838.86	0.33	-0.18	-67.51
9,193.00	0.53	107.47	9,063.82	817.48	-186.60	838.49	0.45	0.37	-49.31
9,287.00	0.88	128.91	9,157.81	816.89	-185.63	837.70	0.46	0.37	22.81
9,381.00	0.88	151.32	9,251.80	815.81	-184.72	836.43	0.36	0.00	23.84
9,476.00	0.88	151.94	9,346.79	814.52	-184.03	835.02	0.01	0.00	0.65
9,570.00	1.06	143.68	9,440.78	813.19	-183.17	833.53	0.24	0.19	-8.79
9,665.00	1.32	152.20	9,535.76	811.51	-182.14	831.66	0.33	0.27	8.97
9,725.00	2.02	143.77	9,595.73	810.05	-181.19	830.02	1.23	1.17	-14.05
LAST SDI MI	WD PRODUCTION	ON SURVEY	12						
9,781.00	2.02	143.77	9,651.70	808.45	-180.03	828.20	0.00	0.00	0.00

Design Annotations			ABNI PRIVINCE TO ST	
Measured	Vertical	Local Coor	프립티 기존으로 하고 보고 있다.	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
195.00	194.99	-0.80	1.13	FIRST SDI MWD SURFACE SURVEY
2,701.00	2,598.55	628.70	-147.95	LAST SDI MWD SURFACE SURVEY
2,774.00	2,667.98	650.53	-153.56	FIRST SDI MWD PRODUCTION SURVEY
9,725.00	9,595.73	810.05	-181.19	LAST SDI MWD PRODUCTION SURVEY
9,781.00	9,651.70	808.45	-180.03	SDI PROJECTION TO TD

Checked By:	Approved By:	Date:
JJ		



# Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12 NBU 921-25I Pad NBU 921-25H3DS

ОН

Design: OH

# **Survey Report - Geographic**

28 December, 2010







Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well:

NBU 921-25l Pad NBU 921-25H3DS

Wellbore: Design:

OH

ОН

Local Co-ordinate Reference:

Well NBU 921-25H3DS GL 4980' & RKB 25 @ 5005.00ft (H&P 311) **TVD Reference:** 

**MD Reference:** 

North Reference:

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

Survey Calculation Method:

Database:

Minimum Curvature

EDM5000-RobertS-Local

**Project** 

Uintah County, UT UTM12

Map System:

Universal Transverse Mercator (US Survey Feet)

Geo Datum: Map Zone:

Zone 12N (114 W to 108 W)

NAD 1927 - Western US

System Datum:

Mean Sea Level

Site

NBU 921-25l Pad, SEC 25 T9S R21E

Site Position:

Northing:

14,531,604.32 usft

Latitude:

40° 0' 19.663 N

From:

Lat/Long

Easting:

2,062,597.96 usft

Longitude:

109° 29' 32.762 W

**Position Uncertainty:** 

0.00 ft

Slot Radius:

13.200 in

**Grid Convergence:** 

0.97 °

Well

NBU 921-25H3DS, 2035' FSL 684' FEL

**Well Position** 

+N/-S +E/-W 0.00 ft 0.00 ft Northing: Easting:

14,531,604.32 usft 2,062,597.96 usft Latitude: Longitude: 40° 0' 19.663 N

**Position Uncertainty** 

0.00 ft

Wellhead Elevation:

**Ground Level:** 

109° 29' 32.762 W

4,980.00 ft

Wellbore

OH

**Magnetics** 

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

346.79

**IGRF2010** 

11/19/2010

11.15

65.89

52,390

Design

OH

**Audit Notes:** 

Version:

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

Date

+N/-S

0.00

+F/-W

0.00

Direction

Vertical Section: Depth From (TVD) (ft) (ft) (°) (ft)

0.00

**Survey Program** From

To

(ft) (ft)

Survey (Wellbore)

**Tool Name** 

Description

21.00 2,774.00 2,701.00 Survey #1 SDI MWD Surface (OH) 9,781.00 Survey #2 SDI MWD Production (OH)

12/28/2010

MWD SDI MWD SDI MWD - Standard ver 1.0.1 MWD - Standard ver 1.0.1

Survey Vertical Мар Map Measured Depth +E/-W Northing Easting Depth Azimuth +N/-S Inclination (ft) (ft) (ft) (ft) (usft) (usft) Latitude Longitude (°) (°) 0.00 0.00 2.062.597.96 40° 0' 19.663 N 109° 29' 32.762 W 0.00 0.00 0.00 14 531 604 32 0.00 0.00 0.00 21.00 0.00 0.00 14,531,604.32 2,062,597.96 40° 0' 19.663 N 109° 29' 32.762 W 21.00 109° 29' 32.748 W 195.00 0.91 125.33 194.99 -0.80 1.13 14,531,603.54 2,062,599.10 40° 0' 19.655 N FIRST SDI MWD SURFACE SURVEY 40° 0' 19.661 N 109° 29' 32.741 W 285.00 1.24 356.86 284.99 -0.24 1.66 14,531,604.11 2,062,599.62 40° 0' 19,690 N 109° 29' 32.743 W 1.48 2.062,599,39 374.93 2.75 14,531,607.10 375.00 2.58 356.49 354.33 464.76 8.24 1.01 14,531,612.57 2,062,598.83 40° 0' 19.745 N 109° 29' 32.749 W 465.00 4.43 40° 0' 19.823 N 2,062,596.95 109° 29' 32.772 W 555.00 6.04 342.75 554.38 16.22 -0.74 14,531,620.52 643.77 26.33 -3.56 14,531,630.58 2,062,593.95 40° 0' 19.923 N 109° 29' 32.808 W 645.00 7.36 345.70 735.00 8.21 338.72 732.94 37.90 -7.32 14,531,642.09 2,062,590.00 40° 0' 20.038 N 109° 29' 32.856 W 109° 29' 32.915 W -11.85 14,531,655.55 2,062,585.24 40° 0' 20.172 N 821.80 51.45 825.00 10.07 343.80





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site:

NBU 921-25I Pad NBU 921-25H3DS

Well: Wellbore: Design:

он Он Local Co-ordinate Reference:

**Survey Calculation Method:** 

TVD Reference:

TVD Neierence.

MD Reference:

North Reference:

Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

True

Minimum Curvature
EDM5000-RobertS-Local

					<del> </del>				
/ey									
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Map Northing	Map Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
915.00	11.85	346.86	910.15	68.00	-16.14	14,531,672.04	2,062,580.67	40° 0' 20.335 N	109° 29' 32.970
1,005.00	12.85	348.96	998.07	86.82	-20.16	14,531,690.79	2,062,576.33	40° 0' 20.521 N	109° 29' 33.022
1,005.00	14.51	346.73	1,085.51	107.62	-24.67	14,531,711.51	2,062,571.48	40° 0' 20.727 N	109° 29' 33.079
1,185.00	16.06	346.68	1,172.33	130.71	-30.12	14,531,734.50	2,062,565.63	40° 0' 20.955 N	109° 29' 33.150
1,185.00	17.34	349.03	1,258.53	155.99	-35.54	14,531,759.69	2,062,559.78	40° 0' 21.205 N	109° 29' 33.21
1,365.00	18.00	345.07	1,344.29	182.60	-41.68	14,531,786.18	2,062,553.20	40° 0' 21.468 N	109° 29' 33.29
1,365.00	19.83	348.16	1,429.42	210.98	-48.39	14,531,814.45	2,062,546.00	40° 0' 21.749 N	109° 29' 33.38
1,545.00	20.73	345.41	1,513.85	241.33	-55.54	14,531,844.68	2,062,538.35	40° 0' 22.049 N	109° 29' 33.47
	21.50	344.08	1,597.80	272.61	-64.08	14,531,875.80	2,062,529.28	40° 0' 22.358 N	109° 29' 33.58
1,635.00	22.56	343.29	1,681.23	305.01	-73.56	14,531,908.03	2,062,519.25	40° 0' 22.678 N	109° 29' 33.70
1,725.00		343.29	1,764.63	337.17	-84.02	14,531,940.02	2,062,508.24	40° 0' 22.996 N	109° 29' 33.842
1,815.00	21.60		1,848.52	368.06	-94.43	14,531,970.73	2,062,497.32	40° 0' 23.301 N	109° 29' 33.976
1,905.00	20.87	342.19	1,932.53	399.02	-103.62	14,532,001.53	2,062,487.60	40° 0' 23.607 N	109° 29' 34.094
1,995.00	21.20	344.71		429.91	-111.41	14,532,032.28	2,062,479.29	40° 0' 23.913 N	109° 29' 34.194
2,085.00		347.04	2,016.70	458.38	-117.57	14,532,060.65	2,062,472.65	40° 0' 24.194 N	109° 29' 34.27
2,175.00		348.63	2,101.84	486.13	-117.57	14,532,000.00	2,062,467.02	40° 0' 24.468 N	109° 29' 34.34
2,265.00		350.22	2,187.30	515.48	-122.74	14,532,088.50	2,062,461.08	40° 0' 24.758 N	109° 29' 34.41
2,355.00		348.81	2,272.20	544.90	-133,36	14,532,146.88	2,062,455.40	40° 0' 25.049 N	109° 29' 34.47
2,445.00		351.26	2,357.10	574.43	-138.14	14,532,176.32	2,062,450.12	40° 0' 25.341 N	109° 29' 34.53
2,535.00		350.33	2,441.98	604.11	-143.20	14,532,176.32	2,062,444.56	40° 0' 25.634 N	109° 29' 34.60
2,625.00		350.33	2,526.80	628.70	-143.20	14,532,230.43	2,062,439.39	40° 0' 25.878 N	109° 29' 34.66
2,701.00		347.79	2,598.55	020.70	-147.50	14,552,250.45	2,002,408.08	40 0 20,070 14	100 20 0 1100
2,774.00	DI MWD SURF 16.84	343.09	Y 2,667.98	650.53	-153.56	14,532,252.16	2,062,433.41	40° 0' 26.093 N	109° 29' 34.73
	DI MWD PRO		•						
2,868.00		346.71	2,758.14	676.18	-160.50	14,532,277.68	2,062,426.04	40° 0' 26.347 N	109° 29' 34.82
2,963.00		351.01	2,849.60	701,38	-165.49	14,532,302.79	2,062,420.63	40° 0' 26.596 N	109° 29' 34.88
3,057.00		352.33	2,940.30	725.79	-169.06	14,532,327.14	2,062,416.64	40° 0' 26.837 N	109° 29' 34.93
3,151.00		350.84	3,031.39	748.74	-172.44	14,532,350.03	2,062,412.87	40° 0' 27.064 N	109° 29' 34.97
3,246.00		350.92	3,123.74	770.77	-175.98	14,532,372.00	2,062,408.97	40° 0' 27,282 N	109° 29' 35.02
3,340.00		348.46	3,215.35	791.46	-179.72	14,532,392.62	2,062,404.88	40° 0' 27.486 N	109° 29' 35.07
3,435.00			3,308.73	808.16	-184.55	14,532,409.24	2,062,399.77	40° 0' 27.651 N	109° 29' 35.13
3,529.00			3,401.88	819.31	-190.25	14,532,420.29	2,062,393.88	40° 0' 27,762 N	109° 29' 35.20
			3,496.54	825.89	-194.55	14,532,426.79	2,062,389.46	40° 0' 27.827 N	109° 29' 35.26
3,624.00 3,718.00		311.72	3,590.45	829.07	-197.08	14,532,429.93	2,062,386.89	40° 0' 27.858 N	109° 29' 35.29
3,813.00			3,685.41	830.57	-199.36	14,532,431.39	2,062,384.58	40° 0' 27.873 N	109° 29' 35.32
3,907.00			3,779.39	830.48	-201.13	14,532,431.28	2,062,382.81	40° 0' 27.872 N	109° 29' 35.34
			3,873.38	829.06	-201.64	14,532,429.84	2,062,382.32	40° 0' 27.858 N	109° 29' 35.35
4,001.00			3,968.35	826.90	-201.51	14,532,427.68	2,062,382.49	40° 0' 27.837 N	109° 29' 35.35
4,096.00			4,062.32	824.38	-201.65	14,532,425.17	2,062,382.39	40° 0' 27.812 N	109° 29' 35.35
4,190.00 4,284.00			4,062.32	821.72	-201.63	14,532,422.51	2,062,382.46	40° 0' 27.785 N	109° 29' 35.35
•			4,251.23	818.69	-201.05	14,532,419.48	2,062,382.89	40° 0' 27.755 N	109° 29' 35.34
4,379.00				816.84	-199.41	14,532,417.67	2,062,384.76	40° 0' 27.737 N	109° 29' 35.32
4,473.00			4,345.19		-195.83	14,532,417.44	2,062,388.35	40° 0' 27.734 N	109° 29' 35.27
4,567.00			4,439.12	816.56	-192.30	14,532,417.17	2,062,391.87	40° 0' 27.731 N	109° 29' 35.23
4,662.00			4,534.06	816.22	-189.63	14,532,416.29	2,062,394.56	40° 0' 27.722 N	109° 29' 35.20
4,756.00			4,628.01	815.30	-187.22	14,532,414.97	2,062,396.99	40° 0' 27.708 N	109° 29' 35.16
4,851.00			4,722.97	813,94				40° 0' 27.694 N	109° 29' 35.14
4,945.00			4,816.94	812.44	-185.31	14,532,413.51	2,062,398.93	40° 0' 27.677 N	109 29 35.14 109° 29' 35.12
5,039.00			4,910.92	810.74	-183.97	14,532,411.83	2,062,400.30		109 29 35.12 109° 29' 35.11
5,134.00			5,005.91	810.41	-183.32	14,532,411.51	2,062,400.95	40° 0' 27.674 N	
5,228.00			5,099.87	812.66	-184.17	14,532,413.74	2,062,400.07	40° 0' 27.696 N	109° 29' 35.13
5,322.00			5,193.81	815.71	-185.79	14,532,416.77	2,062,398.40	40° 0' 27.726 N	109° 29' 35.15
5,417.00				818.49	-187.24	14,532,419.52	2,062,396.90	40° 0' 27.753 N	109° 29' 35.16
5,511.00				821.06	-188.55	14,532,422.07	2,062,395.54	40° 0' 27.779 N	109° 29' 35.18
5,605.0	0 1.32			823.20	-189.75	14,532,424.19	2,062,394.31	40° 0' 27.800 N	109° 29' 35.20
5,699.0	0 1.14	314.19	5,570.66	824.78	-190.97	14,532,425.75	2,062,393.06	40° 0' 27.816 N	109° 29' 35.21





Company: Project:

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12

Site:

NBU 921-25I Pad

Well: Wellbore: NBU 921-25H3DS

ОН Design: ОН Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

**Survey Calculation Method:** Database:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

Minimum Curvature

EDM5000-RobertS-Local

Measured			Vertical			Мар	Мар		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)	Latitude	Longitude
5,794.00	0.82	311.39	5,665.65	825.89	-192.16	14,532,426.84	2,062,391.86	40° 0' 27.827 N	109° 29' 35.23
5,888.00	0.97	272.53	5,759.64	826.37	-193.46	14,532,427.29	2,062,390.55	40° 0' 27.831 N	109° 29' 35.24
5,982.00	1.06	259.34	5,853.62	826.24	-195.11	14,532,427.14	2,062,388.90	40° 0' 27.830 N	109° 29' 35.2'
6,077.00	88.0	241.06	5,948.61	825.73	-196.61	14,532,426.60	2,062,387.41	40° 0' 27.825 N	109° 29' 35.2
6,171.00	0.97	223.31	6,042.60	824.80	-197.79	14,532,425.65	2,062,386.25	40° 0' 27.816 N	109° 29' 35.3
6,266.00	1.06	207.05	6,137.58	823.43	-198.74	14,532,424.27	2,062,385.32	40° 0' 27.802 N	109° 29' 35.3
6,360.00	1.14	202.13	6,231.56	821.79	-199.49	14,532,422.62	2,062,384.60	40° 0' 27.786 N	109° 29' 35.3
6,454.00	1.14	191.53	6,325.55	820.01	-200.03	14,532,420.82	2,062,384.09	40° 0' 27.769 N	109° 29' 35.3
6,549.00	1,58	175.93	6,420.52	817.78	-200.12	14,532,418.59	2,062,384.03	40° 0' 27.746 N	109° 29' 35.3
6,643.00	1.76	175.49	6,514.48	815.05	-199.92	14,532,415.86	2,062,384.28	40° 0' 27.719 N	109° 29' 35.3
6,737.00	1.58	85.49	6,608.45	813.71	-198.51	14,532,414.55	2,062,385.71	40° 0' 27.706 N	109° 29' 35.3
6,832.00	2.55	50.95	6,703.39	815.14	-195.56	14,532,416.03	2,062,388.63	40° 0' 27.720 N	109° 29' 35.2'
6,926.00	2.20	52.71	6,797.31	817.55	-192.50	14,532,418.50	2,062,391.65	40° 0' 27.744 N	109° 29' 35.2
7,020.00	1,93	56.67	6,891.25	819.52	-189.75	14,532,420.50	2,062,394.38	40° 0' 27.764 N	109° 29' 35.20
7,115.00	1.85	73.54	6,986.20	820.83	-186.94	14,532,421.86	2,062,397.16	40° 0' 27.777 N	109° 29' 35.16
7,209.00	1.67	85.41	7,080.16	821.37	-184.12	14,532,422.45	2,062,399.97	40° 0' 27.782 N	109° 29' 35.1
7,304.00	1.49	87.34	7,175.12	821.54	-181.51	14,532,422.66	2,062,402.58	40° 0' 27.784 N	109° 29' 35.0
7,398.00	1.85	85.41	7,269.08	821.72	-178.77	14,532,422.89	2,062,405.31	40° 0' 27.785 N	109° 29' 35.0
7,493.00	0.70	344.42	7,364.06	822.40	-177.40	14,532,423.59	2,062,406.67	40° 0' 27.792 N	109° 29' 35.0
7,587.00	2.02	316.65	7,458.03	824.15	-178.69	14,532,425.33	2,062,405.35	40° 0' 27.809 N	109° 29' 35.0
7,681.00	1.63	315.47	7,551.99	826.31	-180.77	14,532,427.45	2,062,403.24	40° 0' 27.831 N	109° 29' 35.0
7,776.00	0.88	314.45	7,646.96	827.79	-182.23	14,532,428.90	2,062,401.75	40° 0' 27.845 N	109° 29' 35.10
7,870.00	0.53	293.62	7,740.96	828.47	-183.15	14,532,429.57	2,062,400.82	40° 0' 27.852 N	109° 29' 35.1
7,965.00	0.26	232.89	7,835.95	828.51	-183.72	14,532,429.60	2,062,400.25	40° 0' 27.853 N	109° 29' 35.12
8,059.00	0.53	292,65	7,929.95	828.55	-184.29	14,532,429.63	2,062,399.68	40° 0' 27.853 N	109° 29' 35.13
8,153.00	0.44	305.22	8,023.95	828.93	-184.99	14,532,429.99	2,062,398.97	40° 0' 27.857 N	109° 29' 35.1
8,248.00	0.27	256.51	8,118.95	829.09	-185.51	14,532,430.14	2,062,398.45	40° 0' 27.858 N	109° 29' 35.14
8,342.00	0.53	188.87	8,212.94	828.60	-185.79	14,532,429.66	2,062,398.18	40° 0' 27.853 N	109° 29' 35.1
8,437.00	0.97	184.02	8,307.94	827.37	-185.91	14,532,428.42	2,062,398.08	40° 0' 27.841 N	109° 29' 35.1
8,531.00	1.32	171.01	8,401.92	825.50	-185.80	14,532,426.56	2,062,398.22	40° 0' 27.823 N	109° 29' 35.1
8,626.00	1.49	173.56	8,496.89	823.20	-185.49	14,532,424.26	2,062,398.57	40° 0' 27.800 N	109° 29' 35.14
8,721.00	1.85	182.00	8,591.85	820.44	-185.40	14,532,421.50	2,062,398.70	40° 0' 27.773 N	109° 29' 35.14
8,815.00	0.44	246.69	8,685.83	818.78	-185.79	14,532,419.83	2,062,398.35	40° 0' 27.756 N	109° 29' 35.1
8,909.00	0.45	246.12	8,779.83	818.48	-186.46	14,532,419.53	2,062,397.68	40° 0' 27.753 N	109° 29' 35.1
9,004.00	0.35	217.77	8,874.82	818.10	-186.98	14,532,419.14	2,062,397.17	40° 0' 27.750 N	109° 29' 35.16
9,098.00	0.18	154.31	8,968.82	817.74	-187.09	14,532,418.78	2.062,397.06	40° 0' 27.746 N	109° 29' 35.10
9,193.00	0,53	107.47	9,063.82	817.48	-186.60	14,532,418.52	2,062,397.55	40° 0' 27.743 N	109° 29' 35.16
9,287.00	0.88	128.91	9,157.81	816.89	-185.63	14,532,417.95	2,062,398.54	40° 0' 27.738 N	109° 29' 35.14
9,381.00	0.88	151.32	9,251.80	815.81	-184.72	14,532,416.88	2,062,399.46	40° 0' 27.727 N	109° 29' 35.1
9,476.00	0.88	151.94	9,346.79	814.52	-184.03	14,532,415.61	2,062,400.18	40° 0' 27.714 N	109° 29' 35.12
9,570.00	1.06	143.68	9,440.78	813.19	-183.17	14,532,414.29	2,062,401.06	40° 0' 27.701 N	109° 29' 35.1
9,665.00	1.32	152.20	9,535.76	811.51	-182.14	14,532,412.63	2,062,402.12	40° 0' 27,685 N	109° 29' 35.10
9,725.00	2.02	143.77	9,595.73	810.05	-181.19	14,532,411.18	2,062,403.09	40° 0' 27.670 N	109° 29' 35.0
	I MWD PROD					.,,			
9,781.00	2.02	143.77	9,651.70	808.45	-180.03	14,532,409.61	2,062,404.28	40° 0' 27.654 N	109° 29' 35.0'
	JECTION TO		0,001.70	000.70	, 50.00	17,000,700.01	2,002,707.20	70 0 21.004 N	100 62 60.01





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 921-25l Pad NBU 921-25H3DS

Wellbore: Design:

ОН ОН

**TVD Reference:** 

MD Reference:

North Reference:

Local Co-ordinate Reference:

Well NBU 921-25H3DS

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

GL 4980' & RKB 25 @ 5005.00ft (H&P 311)

True

Minimum Curvature

Survey Calculation Method:

Database:

EDM5000-RobertS-Local

Design Anno	tations				
	Measured	Vertical	Local Cod	ordinates	
	Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
	195.00	194.99	-0.80	1.13	FIRST SDI MWD SURFACE SURVEY
	2,701.00	2,598.55	628.70	-147.95	LAST SDI MWD SURFACE SURVEY
	2,774.00	2,667.98	650.53	-153.56	FIRST SDI MWD PRODUCTION SURVEY
	9,725.00	9,595.73	810.05	-181.19	LAST SDI MWD PRODUCTION SURVEY
	9,781.00	9,651.70	808.45	-180.03	SDI PROJECTION TO TD

Checked By:	Approve	d By:	Date:	
•	**************************************			

STATE OF UTAH AMENDED REPORT FORM 8 DEPARTMENT OF NATURAL RESOURCES (highlight changes) DIVISION OF OIL, GAS AND MINING 5. LEASE DESIGNATION AND SERIAL NUMBER: UO 1189 ST 6. IF INDIAN, ALLOTTEE OR TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG 1a TYPE OF WELL: UNIT or CA AGREEMENT NAME GAS WFII OTHER UTU63047A b. TYPE OF WORK: 8. WELL NAME and NUMBER: DIFF. RESVR. WELL 🗸 RE-ENTRY NBU 921-25H3DS OTHER 2. NAME OF OPERATOR: 9. API NUMBER: KERR MCGEE OIL & GAS ONSHORE, L.P. 4304751269 3. ADDRESS OF OPERATOR: PHONE NUMBER: 10 FIELD AND POOL, OR WILDCAT P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 (720) 929-6100 NATURAL BUTTES QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: 4. LOCATION OF WELL (FOOTAGES) AT SURFACE: NESE 2074 FSL 690 FEL S25, T9S, R21E NESE 25 9S 21E S AT TOP PRODUCING INTERVAL REPORTED BELOW: SENE 2388 FNL 874 FEL S25, T9S, R21E 12. COUNTY 13. STATE AT TOTAL DEPTH: SENE 2401 FNL 870 FEL S25, T9S, R21E UTAH UINTAH 14. DATE SPUDDED: 15. DATE T.D. REACHED: 16. DATE COMPLETED: 17. ELEVATIONS (DF, RKB, RT, GL): ABANDONED 🗸 READY TO PRODUCE 🗸 11/17/2010 12/25/2010 4980 GL 3/31/2011 19. PLUG BACK T.D.: MD 9.737 18. TOTAL DEPTH: 21. DEPTH BRIDGE MD 20. IF MULTIPLE COMPLETIONS, HOW MANY? \* 9.781 PLUG SET: TVD 9,652 TVD 9.608 TVD 22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) NO 🗸 WAS WELL CORED? YES (Submit analysis) ACBL-CHI TRIPLE COMBO-RMTE WAS DST RUN? NO 🗸 YES (Submit report) DIRECTIONAL SURVEY? NO [ YES 🗸 (Submit copy) 24. CASING AND LINER RECORD (Report all strings set in well) STAGE CEMENTER **CEMENT TYPE &** SLURRY HOLE SIZE SIZE/GRADE WEIGHT (#/ft.) TOP (MD) BOTTOM (MD) CEMENT TOP \*\* AMOUNT PULLED DEPTH NO. OF SACKS VOLUME (BBL) 20" STL 36.7# 40 28 11" **IJ-55** 28# 8 5/8" 2,728 1,050 0 7 7/8" 4 1/2" 1-80 11.6# 9.736 5780 1.805 7 7/8" 11.6# 9.736 9,781 4 1/2" P110 25. TUBING RECORD SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) SIZE DEPTH SET (MD) PACKER SET (MD) 2 3/8" 9,077 27. PERFORATION RECORD FORMATION NAME TOP (MD) BOTTOM (MD) TOP (TVD) BOTTOM (TVD) INTERVAL (Top/Bot - MD) NO. HOLES PERFORATION STATUS SIZE

26. PRODUCING INTERVALS 7,216 (A) WASATCH 7,488 7,216 7.488 0.36 24 Open Squeezed **MESAVERDE** 7,574 9,487 7,574 9,487 0.36 179 Open Squeezed (C) Open Squeezed

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL	
7216 - 9487	PUMP 10,222 BBLS SLICK H2O & 392,208 LBS SAND	
29. ENCLOSED ATTACHMENTS:		30. WELL STATUS:

ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT ✓ DIRECTIONAL SURVEY SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION OTHER: CORE ANALYSIS

AUG 2 9 2011

Squeezed

(D)

		ICTION

31. INITIAL PRO	DUCTION				INTE	ERVAL A (As show	wn in item #26)					
3/31/2011		TEST DAT 4/8/20			HOURS TESTED	: 24	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 2,801	WATER - E		PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS 1,854			AVITY	BTU – GAS	-	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF: 2,801	WATER - E 528	BBL:	INTERVAL STATUS: PROD
					INTE	ERVAL B (As show	vn in item #26)				Z (MANISH MANISH MA	
DATE FIRST PR	ODUCED:	TEST DAT	ΓE:	· · · · · · · · · · · · · · · · · · ·	HOURS TESTED	! !	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - E	BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	. CSG. PRE	SS. API GR	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - E	BBL:	INTERVAL STATUS:
					INTE	ERVAL C (As show	wn in item #26)		and the second second second second second	**************************************	NOW YOU HAVE	
DATE FIRST PR	DATE FIRST PRODUCED: TEST DATE:				TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – E	BBL:	PROD. METHOD:		
CHOKE SIZE:	TBG. PRESS	. CSG. PRE	SS. API GR	AVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - E	BBL:	INTERVAL STATUS:
			***************************************		INTE	ERVAL D (As sho	wn in item #26)					
DATE FIRST PR	ODUCED:	TEST DAT	ΓE:		HOURS TESTED	): :	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – E	BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS	. CSG. PRE	SS. API GR	AVITY -	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	N OIL – BBL:	GAS - MCF:	WATER - E	BBL:	INTERVAL STATUS:
32. DISPOSITIO	N OF GAS (So	old, Used for F	uel, Vented, Etc	÷.)		The control of the co						e de la compresión en relación de la compresión de la compresión de la compresión de la compresión de la compre
33. SUMMARY	OF POROUS Z	ONES (Include	Aquifers):				3	34. FORMATION (	Log) MARKERS:			HING-INCOMPRISE CO.
Show all importatested, cushion u					ls and all drill-stem ecoveries.	tests, including de	pth interval					
Formatio	on	Top (MD)	Bottom (MD)		Descript	ions, Contents, etc	;.		Name		1)	Top Measured Depth)
GREEN R	IVER	1 544									-	

					Market Street, Square
35.	ADDITIONAL	REMARKS	(Include	plugging	procedure)

**BIRD'S NEST** 

**MAHOGANY** 

**MESAVERDE** 

WASATCH

Attached is the chronological well history and final survey. Completion chrono details individual frac stages.

Amended # 28 on Completion Report. Attaching revised Completion Chrono.

TD

36. I hereby certify that the foregoing and attached information is complete and correct as determined from a	all available records
---	-----------------------

NAME (PLEASE PRINT) ANDREW LYTLE

1.865

2,253

4,879

7,561

7,561

9,781

REGULATORY ANALYST

SIGNATURE

8/23/2011 DATE

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- · reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests
- \* ITEM 20: Show the number of completions if production is measured separately from two or more formations.
- \*\* ITEM 24: Cement Top Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to:

Utah Division of Oil, Gas and Mining 1594 West North Temple, Suite 1210

Box 145801

Phone: 801-538-5340

Salt Lake City, Utah 84114-5801

Fax: 801-359-3940

						s Rock						
					Opera	ition S	umma	ry Report				
Well: NBU 921-	25H3DS I	RED		Spud Co	Spud Conductor: 11/17/2010 Spud Date: 11/19/2010							
Project: UTAH-I	HATAIL			Site: NBI	J 921-25I	PAD		Rig Name No: GWS 1/1				
Event: COMPLI	ETION			Start Date	e: 3/15/20	)11		End Date: 3/31/2011				
Active Datum: F	RKB @5,0	05.00ft (abov	e Mean Sea		UWI: NI	E/SE/0/9/5	S/21/E/25	/0/0/26/PM/S/2074/E/0/690/0/0				
Date	************************************	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (ft)				
3/15/2011	6:45	- 7:00	0.25	COMP	48		Р	HSM. HIGH PSI LINES.				
	7:00	- 15:00	8.00	COMP	37	В	P	MIRU B&C QUICK TEST & CASED HOLE SOLUTIONS. PSI TEST 4 1/2 CSG & BOTH FRAC VALVES AS PER PROCEDURE. PSI TEST & CHECK FOR COMUNICATION INSIDE 4 1/2. GOOD TEST. RDMO B&C QUICK TEST. PERF STG1) PU 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH PERF F/ 9486'-87', 4 SPF, 4 HOLES. 9466'-67, 3 SPF, 3 HOLES. 9352'-54', 3 SPF, 6 HOLES. 9282'-83', 4 SPF, 4 HOLES. 9254'-55', 4 SPF, 4 HOLES. 21 HOLES. POOH, SWIFN.				
3/16/2011	6:45	- 7:00	0.25	COMP	48		P	HSM. MIRU.				
	7:00	- 16:45	9.75	COMP	46	E	P	MIRU SUPERIOR FRAC SERV.				
		- 18:00	1.25	COMP	33	В	P	PRESSURE TEST LINES TO 8000 PSI. SAND MASTER THAT HOLDS ALL THE RESIN SAND, BELT CAME APPART. CANNOT PUMP UNTIL BELT IS REPAIRD. SDFN				
3/17/2011	6:45	- 6:50	0.08	COMP	48		Р	HSM. SIME OPS				

## Operation Summary Report

Well: NBU 921-25H3DS RED			Spud Cor	nductor: 11/17/20	10	Spud Date: 11/	/2010		
Project: UTAH-UINT	AH		Site: NBU	921-251 PAD			Rig Name No: GWS 1/1		
Event: COMPLETION			Start Date	e: 3/15/2011			End Date: 3/31/2011		
Active Datum: RKB (		UWI: NE/SE/0/9	/S/21/E/25/0	/0/26/PM/S/207	74/E/0/690/0/0				
_evel) Date	Time	Duration	Phase	Code Sub	P/U	MD From	Operation		
6	Start-End :50 - 6:50	(hr)   0,00	COMP	Code		(ft)	EDAC STC 1/MALD 1295 DSI DBV 2290 DSI @ 4 9		
,	0.00	0.00	00				FRAC STG 1)WHP 1285 PSI, BRK 3380 PSI @ 4.8 BPM. ISIP 2656 PSI, FG .72.		
							PUMP 100 BBLS @ 43.2 BPM @ 5718 PSI = 85%		
							HOLES OPEN.		
							ISIP 2829 PSI, FG .74, NPI 153 PSI.		
							MP 6781 PSI, MR 51.8 BPM, AP 5558 PSI, AR 46.7		
							BPM,		
							PMP 1127 BBLS SW & 32,033 LBS OF 30/50 SND &		
							4,798 LBS OF 20/40 SLC SND. TOTAL PROP 36,831		
							LBS.		
				,			SWI, X-OVER FOR WL.		
							PERF STG 2)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN,		
							23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH		
	•						SET CPB @ 9235' P/U PERF F/		
							9204'-05', 4 SPF, 4 HOLES.		
							9186'-88', 3 SPF, 6 HOLES.		
							9160'-61', 3 SPF, 3 HOLES.		
							9124'-26', 3 SPF, 6 HOLES.		
							9104'-05', 3 SPF, 3 HOLES. 21 HOLES. POOH, X-OVER FOR FRAC CREW.		
							FOOH, A-OVER FOR FRAC CREW.		
							FRAC STG 2) WHP 1800 PSI, BRK 3007 PSI @ 4.8		
							BPM. ISIP 2516 PSI, FG .71.		
							PUMP 100 BBLS @ 49.6 BPM @ 5653 PSI = 97%		
							HOLES OPEN.		
							ISIP 2831 PSI, FG .75, NPI 315 PSI.		
							MP 6371 PSI, MR 50.3 BPM, AP 4956 PSI, AR 48.9		
							BPM,		
							PMP 1945 BBLS SW & 70,676 LBS OF 30/50 SND & 4,703 LBS OF 20/40 SLC SND. TOTAL PROP 75379		
							LBS		
							SW, X-OVER FOR WL.		
							PERF STG 3) PU 4 1/2 8K HAL CBP & 3 3/8 EXP		
							GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG		
							PHASING. RIH SET CPB @ 9054' P/U PERF F/		
							9004-06. 3 SPF. 6 HOLES		
							8944-46. 4 SPF. 8 HOLES 8916-18. 4 SPF. 8 HOLES. 21 HOLES.		
							POOH, X-OVER FOR FRAC CREW.		
							FRAC STG 3) WHP 2236 PSI, BRK 3537 PSI @ 4.7		
							BPM. ISIP 2559 PSI, FG 0.72.		
							PUMP 100 BBLS @ 41.9 BPM @ 5751 PSI = 74%		
							HOLES OPEN.		
							ISIP 2723 PSI, FG .74, NPI 164 PSI. MP 6780 PSI, MR 51.2 BPM, AP 5410 PSI, AR 48.8		
							BPM.		
							PMP 998 BBLS SW & 33,522 LBS OF 30/50 SND &		
							4,784 LBS OF 20/40 SLC SND. TOTAL PROP 38,306		
							LBS,		

8/23/2011 12:47:34PM

SWI, X-OVER FOR WL.

PERF STG 4) PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH

US ROCKIES REGION  Operation Summary Report								
Well: NBU 921-25H3DS RED	Spud Conductor: 11/17/2010	Spud Date: 11/19/2010						
Project: UTAH-UINTAH	Site: NBU 921-25I PAD	Rig Name No: GWS 1/1						
Event: COMPLETION	Start Date: 3/15/2011	End Date: 3/31/2011						
Active Datum: RKB @5,005.00ft (above Mean Sea	UWI: NE/SE/0/9/S/21/	E/25/0/0/26/PM/S/2074/E/0/690/0/0						
Date Time Duration Start-End (hr)	Phase Code Sub P/	U MD From Operation (ft)						
		SET CPB @ 8866' P/U PERF F/						
		8828-29. 3 SPF. 3 HOLES						
		8788-89. 3 SPF. 3 HOLES						
		8752-53. 3 SPF. 3 HOLES						
		8720-22. 3 SPF. 6 HOLES						
		8682-83. 3 SPF. 3 HOLES						
		8643-45. 3 SPF. 6 HOLES. 24 HOLES.						
		POOH, X-OVER FOR FRAC CREW						
		FRAC STG 4)WHP 2150 PSI, BRK 2866 PSI @ 4.7 BPM. ISIP 2074 PSI, FG .68.						
		PUMP 100 BBLS @ 50 BPM @ 5672 PSI = 78% HOLES OPEN.						
		ISIP 2475 PSI, FG .72, NPI 401 PSI.						
		MP 6173 PSI, MR 53.3 BPM, AP 4852 PSI, AR 49.7 BPM,						
		PMP 1350 BBLS SW & 48,568 LBS OF 30/50 SND &						
		4,805 LBS OF 20/40 SLC SND. TOTAL PROP 53,373						
		LBS,						
		SWI, X-OVER FOR WL.						
		PERF STG 5)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN,						
		23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH						
		SET CBP @ 8565' P/U PERF F/						
	•	8512'-15', 4 SPF, 12 HOLES.						
		8456'-57', 4 SPF, 4 HOLES.						
		8298'-00', 3 SPF, 6 HOLES. 22 HOLES. POOH, SWIFN.						

8/23/2011

Well: NBU 921-25H3DS RED Spud C					1/17/20	10	Spud Date: 11/	9/2010		
			J 921-25I	PAD			Rig Name No: GWS 1/1			
			Start Dat	e: 3/15/20	)11			End Date: 3/31/2011		
ctive Datum: R	KB @5,005.00ft (above	e Mean Sea		UWI: NI	E/SE/0/9	/S/21/E/25	/0/0/26/PM/S/207	'4/E/0/690/0/0		
evel)						1				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
3/18/2011	8:00 - 18:00	10.00	COMP	36	В	P		FRAC STG 5) WHP 1383 PSI, BRK 4190 PSI @ 4.9 BPM. ISIP 2164 PSI, FG. 70.  PUMP 100 BBLS @ 38.4 BPM @ 6501 PSI = 60% HOLES OPEN.  ISIP 2262 PSI, FG. 71, NPI 98 PSI.  MP 6939 PSI, MR 50.4 BPM, AP 6092 PSI, AR 44.6 BPM,  PMP 758 BBLS SW & 21,801 LBS OF 30/50 SND & 5,240 LBS OF 20/40 SLC SND. TOTAL PROP 27,041 LBS. SWI X-OVER FOR WL.  (( CAS UNIT SHUT DOWN IN FLUSH. WAS ABLE T/FINISH FLUSH. SD T/FIX BELT ON CAS UNIT. ))  PERF STG 6)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8260' P/U PERF F/8228'-30', 3 SPF, 6 HOLES.  8188'-89', 3 SPF, 3 HOLES.  8174'-76', 3 SPF, 6 HOLES.  8134'-36', 3 SPF, 6 HOLES.		
								POOH, X-OVER FOR WL.  FRAC STG 6)WHP 1960 PSI, BRK 3148 PSI @ 4.6 BPM. ISIP 2173 PSI, FG .70. PUMP 100 BBLS @ 42.7 BPM @ 6014 PSI = 67% HOLES OPEN. ISIP 42.7 PSI, FG .75, NPI 368 PSI. MP 6390 PSI, MR 52.2 BPM, AP 5135 PSI, AR 48.8 BPM, PMP 1101 BBLS SW & 38,557 LBS OF 30/50 SND & 4,978 LBS OF 20/40 SLC SND. TOTAL PROP 43,535 LBS. SWI, X-OVER FOR WL.		
								PERF STG 7)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 8052' P/U PERF F/8000'-02', 4 SPF, 8 HOLES. 7952'-53', 4 SPF, 4 HOLES. 7818'-19', 4 SPF, 4 HOLES. 7818'-19', 4 SPF, 8 HOLES. 24 HOLES. POOH, X-OVER FOR FRAC CREW.  FRAC STG 7)WHP 1188 PSI, BRK 2965 PSI @ 4.7 BPM. ISIP 1246 PSI, FG .60. PUMP 100 BBLS @ 50.6 BPM @ 5770 PSI = 65% HOLES OPEN. ISIP 2050 PSI, FG .70, NPI 804 PSI. MP 5928 PSI, MR 53.7 BPM, AP 4876 PSI, AR 51.8		

PERF STG 8)PU 4 1/2 8K HAL CBP & 3 3/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 7772' P/U PERF F/

PMP 1275 BBLS SW & 44,361 LBS OF 30/50 SND & 5,125 LBS OF 20/40 SLC SND. TOTAL PROP 49,486

LBS. SWI, X-OVER FOR WL.

Well: NBU 921-25H3DS RED Spud Co					nductor:	nductor: 11/17/2010 Spud Date: 11/19/2010					
roject: UTAH-l	JINTAH			Site: NBI	U 921-25I	PAD			Rig Name No: GWS 1/1		
vent: COMPLE	ETION			Start Dat	te: 3/15/20	011	T		End Date: 3/31/2011		
ctive Datum: R	RKB @5,0	05.00ft (abo	ve Mean Sea	-	UWI: NE/SE/0/9/S/21/E/25/0/0/26/PM/S/2074/E/0/690/0/0						
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation		
									7740'-42', 3 SPF, 6 HOLES. 7694'-95', 3 SPF, 3 HOLES. 7612'-13', 4 SPF, 4 HOLES. 7604'-05', 4 SPF, 4 HOLES. 7574'-76', 3 SPF, 6 HOLES. 23 HOLES. POOH. SWIFN.		
3/19/2011	6:30	- 6:45	0.25	COMP	48		Р		HSM,		
	6:45	- 6:45	0.00	COMP	36	E	Р		FRAC STG #8] MESAVERDE 7,574'-7,742' [23 HOLES] FRAC STG #8] WHP=1,123#, BRK DN PERFS=2,039#, @=4.4 BPM, INJ RT=47.8, INJ PSI=6,511#, ISIP=1,328#, FG=.61, PUMP'D 1,668		
									BBLS SLK WTR W/ 63,453# 30/50 MESH W/ 4,804# RESIN COAT IN TAIL, 68,257# TOTAL PROP. ISIP=2,304#, FG=.74, AR=49.7, AP=4,643#, MR=50.8, MP=6,691#, NPI=976# 14/23 CALC PERFS OPEN. 60%		
									TOTAL BBLS=10,222 TOTAL SAND=392,208# 1050 GALS SCALE INHIB 197 GALS BIOCIDE		
3/30/2011	7:00	- 10:00	3.00	COMP	34	I	Р		SICP 630 PSI, MIRU CASEDHOLE WIRELINE, RIH W/ 8 K CBP & SET @ 7,164', RDMO.		
	12:00	- 17:30	5,50	COMP					MIRU, ND FRAC VALVE, NU BOP, INSTAL CAGE OVER WH ON 25i3AS, RU FLOOR & TBG EQUIP, SPOT TBG TRAILER, TALLY & PU TBG TO 5,700', SWI, SDFN.		
3/31/2011	7:00	- 7:15	0.25	COMP	48		Р		HSM, SLIPS, TRIPS & FALLS, PRESS TESTING STAY AWAY FROM PUMPING LINES.		

8/23/2011

#### **Operation Summary Report**

Well: NBU 921-25H3DS RED	Spud Conductor: 11/17/2010	Spud Date: 11/19/2010
Project: UTAH-UINTAH	Site: NBU 921-25I PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 3/15/2011	End Date: 3/31/2011
Active Datum: RKB @5,005.00ft (above Mean Sea	UWI: NE/SE/0/9/S/21/	/E/25/0/0/26/PM/S/2074/E/0/690/0/0

L	.6	vei	,	

Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	•	Operation	
	7:15	- 18:30	11 25	COMP	AA	0	P	CICD	O DOL ODENIMELL	TALLY & DU TDO TO KILL	

SICP 0 PSI, OPEN WELL, TALLY & PU TBG TO KILL PLUG @ 7,164', INSTAL STRIPPING RUBBER & RU POWER SWIVEL, FILL TBG BREAK CIRC, PRESS TEST BOP TO 3,000 PSI, START DRLG PLUGS. ALL SURFACE CSG VAVLES OPEN TO ATMOSPHERE W/ LOCKS ON THEM.

C/O 0' SAND, TAG 1ST PLUG @ 7,164' DRL PLUG IN 11 MIN. 200 PSI INCREASE RIH, CSG PRESS 0 PSI.

C/O 20' SAND, TAG 2ND PLUG @ 7,524' DRL PLUG IN 8 MIN. 800 PSI INCREASE RIH, CSG PRESS 50 PSI.

C/O 20' SAND, TAG 3RD PLUG @ 7,768' DRL PLUG IN 8 MIN. 250 PSI INCREASE RIH, CSG PRESS 50 PSI.

C/O 25' SAND, TAG 4TH PLUG @ 8,036' DRL PLUG IN 9 MIN. 300 PSI INCREASE RIH, CSG PRESS 75 PSI.

C/O 30' SAND, TAG 5TH PLUG @ 8,260' DRL PLUG IN 7 MIN. 250 PSI INCREASE RIH, CSG PRESS 150

C/O 30' SAND, TAG 6TH PLUG @ 8,546' DRL PLUG IN 10 MIN. 500 PSI INCREASE RIH, CSG PRESS 400 PSI.

C/O 30' SAND, TAG 7TH PLUG @ 8,860' DRL PLUG IN 8 MIN. 400 PSI INCREASE RIH, CSG PRESS 400

C/O 60' SAND, TAG 8TH PLUG @ 9,050' DRL PLUG IN 7 MIN. 500 PSI INCREASE RIH, CSG PRESS 500

C/O 35' SAND, TAG 9TH PLUG @ 9,235' DRL PLUG IN 8 MIN. 350 PSI INCREASE RIH, CSG PRESS 600

WORKED ON SWIVEL PACKING 2 TIMES THRU OUT D/O, FINALLY WEATHERFORD SHOWED UP TO C/O PACKING & O-RING.

NOTE: SURFACE CSG STARTED FLOWING AFTER DRLG 2 ND PLUG, FILLING 5 GALLON BUCKET IN 7-10 MINUTES, RAN LINE TO PIT. HOOKUP RIG PUMP TO GET AN INJECTION RATE DOWN SURFACE CSG PRESS UP TO 900 PSI, BLED OFF 10-15 PSI IN 10 MINUTES. SHUT SURFACE CSG IN & MONITOR PRESS, @ 12:30PM= 50 PSI, 12:45PM= 150 PSI, 1:00PM= 150 PSI, 2:00PM= 200 PSI, 3:20PM= 270 PSI, 4:45PM 270 PSI, 5:15PM 170 PSI, PRESS DROPPED 100 PSI AFTER LANDING TBG & SHUTTING FLOW UP 4 1/2" CSG OFF, 4 1/2" CSG PRESS 2,350 PSI, BLED OFF PRESS OFF SURFACE CSG TO PIT & LEFT OPEN, FB CREW WILL WATCH & MONITOR OVERNIGHT & RECORD ON FB REPORT.

## Operation Summary Report

· · · · · · · · · · · · · · · · · · ·			ductor: 11/17/2010	Spud Date: 11	9/2010		
Project: UTAH-L	JINTAH	Site: NBU	921-25I PAD		Rig Name No: GWS 1/1		
Event: COMPLETION Start Date  Active Datum: RKB @5,005.00ft (above Mean Sea Level)			: 3/15/2011		End Date: 3/31/2011		
			UWI: NE/SE/0/9/S/	21/E/25/0/0/26/PM/S/20	74/E/0/690/0/0		
Date	Time [ Start-End	ouration Phase (hr)	Code Sub Code	P/U MD From (ft)	Operation		
					PBTD 9,736', BTM PERF @ 9,487', TAGGED @ 9,600', 113' PAST BTM PERF, W/ 303 JTS 2 3/8" L-80 TBG, LD 17 JTS, PU & STRIP IN TBG HANGER & LAND TBG W/ 286 JTS 2 3/8" L-80, EOT 9,077.50'.		
					RD POWER SWIVEL, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT W/ 3,100 PSI, LET BIT FALL FOR 20 MIN.		
					TURN OVER TO FLOW BACK CREW, SDFN.		
					KB= 25' 4 1/16" WEATHERFORD HANGER= .83' TBG DELIVERED 314 JTS 286 JTS 2 3/8" L-80 = 9,049.47' TBG USED 286 JTS POBS= 2.20' TBG		
					RETURNED 28 JTS (1W/ BAD THREADS) EOT @ 9,077.50' SN @ 9,075.30'		
					TWTR= 10,318 BBLS TWR= 2,000 BBLS TWLTR= 8,316 BBLS CALLED CDC TALKED TO BECKY		
	18:00 - 18:00	0.00 PROD	50		WELL TURNED TO SALES @ 18:00 HR ON 3/31/11 - 1800 MCFD, 1920 BWPD, FTP 150#, CP 2500#, CK 20/64"		
4/1/2011	7:00 -		33 A		7 AM FLBK REPORT: CP 2800#, TP 2500#, 20/64" CK, 55 BWPH, 1/2 C SAND, - GAS TTL BBLS RECOVERED: 2855 BBLS LEFT TO RECOVER: 7463		
4/2/2011	7:00 -		33 A		7 AM FLBK REPORT: CP 3150#, TP 2400#, 20/64" CK, 40 BWPH, TBLSPN SAND, - GAS TTL BBLS RECOVERED: 3950		
4/3/2011	7:00 -		33 A		BBLS LEFT TO RECOVER: 6368 7 AM FLBK REPORT: CP 3000#, TP 2250#, 20/64" CK, 35 BWPH, TSP SAND, - GAS TTL BBLS RECOVERED: 4790		
4/4/2011	7:00 -		33 A		BBLS LEFT TO RECOVER: 5528  7 AM FLBK REPORT: CP 2850#, TP 2150#, 20/64"  CK, 27 BWPH, 1/2 TSP SAND, - GAS  TTL BBLS RECOVERED: 5486  BBLS LEFT TO RECOVER. 4822		
4/5/2011	7:00 -		33 A		BBLS LEFT TO RECOVER: 4832 7 AM FLBK REPORT: CP 2650#, TP 2050#, 20/64" CK, 19 BWPH, TRACE SAND, - GAS TTL BBLS RECOVERED: 6002 BBLS LEFT TO RECOVER: 4316		
4/8/2011	7:00 -		50		WELL IP'D ON 4/8/11 - 2801 MCFD, 0 BOPD, 528 BWPD, CP 2569#, FTP 1854#, CK 20/64", LP 189#, 24 HRS		

Print Form

# BLM - Vernal Field Office - Notification Form

Oper	rator <u>KERR-McGEE OIL &amp; GA</u>	<u>S</u> Rig Name	/# BUCK	KET RIG
Subr	nitted By ANDY LYTLE	Phone Num	ber <u>720.</u>	929.6100
	Name/Number NBU 921-25H			
	Qtr NESE Section 25		s R	ange <u>21E</u>
_	e Serial Number UO 1189 ST			
	Number 4304751269			
_ •	<u>l Notice</u> – Spud is the initial pelow a casing string.	spudding of	the wel	ll, not drilling
	Date/Time <u>11/17/2010</u>	08:00 HRS	AM 🗌	РМ
<u>Casir</u>	<u>ng</u> – Please report time casi s.	ng run starts	s, not ce	ementing
$\overline{\checkmark}$	Surface Casing		RE	CEIVED
	Intermediate Casing		NOV	V 1 5 2010
	Production Casing			
	Liner		GPY OR Ó	AL GAS & MINING
	Other			
	Date/Time <u>11/30/2010</u>	08:00 HRS	АМ 🗌	РМ
BOPI	E Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other	•	t	
	Date/Time		AM 🗌	PM
Rem	arks estimated date and time. Plea	SE CONTACT KENNY	GATHINGS A	Τ
435.82	8.0986 OR LOVEL YOUNG AT 435.781.705	51		